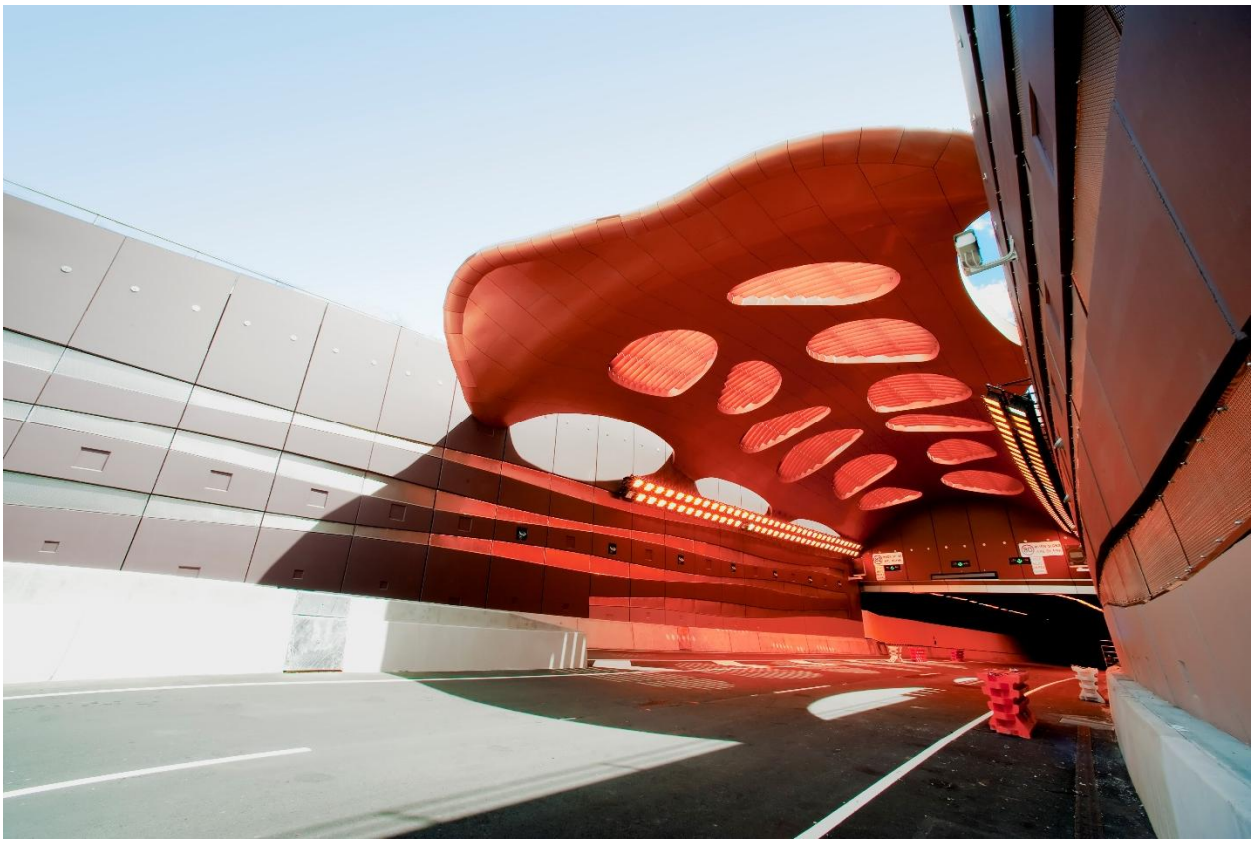
EMERSUB 16 LLC

2019 OFFSITE GROUNDWATER MONITORING REPORT

FORMER KOP-FLEX FACILITY SITE, HANOVER, MARYLAND

JUNE 16, 2020



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FORMER KOP-FLEX FACILITY SITE, HANOVER, MARYLAND

EMERSUB 16 LLC

PROJECT NO.: 31401545.011
DATE: JUNE 16, 2020

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1 INTRODUCTION

On behalf of EMERSUB 16 LLC, WSP USA Inc. (WSP) has prepared this Annual Offsite Groundwater Monitoring Report for activities performed in 2019 with respect to the groundwater plume emanating from the Former Kop-Flex Facility Site (Site) located at 7555 Harmans Road in Hanover, Maryland (Figure 1). The former Kop-Flex, Inc. facility is identified as Site MD0286 under the Brownfield Master Inventory system used by the Maryland Department of the Environment (MDE) Land Restoration Program. This report pertains to the response action activities that were conducted to address the groundwater impacts in the offsite area of the Site, which includes non-residential (light industrial) facilities bordering the former Kop-Flex facility to the north (Verizon Communications), and south and east (Williams Scotsman, Inc.) along with residential communities to the south of Maryland Route 100.

Previous environmental investigations initiated in 1996 identified soil and groundwater impacts associated with historical releases of chlorinated solvents at the former Kop-Flex facility property. The results of investigations conducted in offsite areas beginning in 2012 also showed that site-related volatile organic compounds (VOCs) and 1,4-Dioxane have migrated in the deep groundwater aquifer to the south and southeast of the former facility. Since that time, an offsite groundwater monitoring plan was developed in conjunction with the onsite response actions. The objectives of the ongoing monitoring program are to evaluate the trends in concentrations of site-related VOCs in the aquifer system downgradient of the former Kop-Flex facility and whether additional actions are warranted to protect the drinking water source in the area.

This 2019 Offsite Groundwater Monitoring Report consists of the following sections:

- Section 2 – Site Description and Background
- Section 3 – Environmental Setting and Hydrogeology
- Section 4 – Monitoring Well Abandonment Activities
- Section 5 – Groundwater Monitoring Plan Sampling Procedures
- Section 6 – 2019 Quarterly Sampling Results
- Section 7 – Evaluation of Natural Attenuation Processes
- Section 8 – Summary and Conclusions, including planned 2020 monitoring activities

2 SITE DESCRIPTION

The former Kop-Flex facility is located at 7555 Harmans Road in Hanover, Anne Arundel County, Maryland. The site occupies a total area of approximately 25 acres and contains three buildings - two buildings used as offices and warehouses and a small groundwater treatment facility in the west-central portion of the property - which were constructed during re-development of the parcel in 2016 (Figure 1). The property is bordered to the north by the Verizon maintenance facility; to the east and south by the Williams Scotsman facility, and to the west by undeveloped land along Stony Run, a tributary of the Patapsco River, a new townhome development (Harmans Preserve), and Harmans Road.

The former facility was constructed on previously undeveloped land in 1969 by Koppers Company, Inc., a predecessor in real estate interest of Kop-Flex, Inc. Emerson Electric Co. (Emerson) acquired Kop-Flex in 1996. Kop-Flex manufactured flexible couplings for the mechanical power transmission industry at the site. Manufacturing operations at the facility ceased in late 2012, with all equipment and machining lines subsequently removed from the Site. In December 2014, Emerson transferred the property to its wholly owned subsidiary EMERSUB 16 LLC in preparation for the divestiture of its Power Transmission Solutions business, of which Kop-Flex was a part. Subsequently, EMERSUB 16, LLC sold the property to a third party, Harmans Road Associates, LLC, a subsidiary of Trammell Crow Company. During 2016 and early 2017, the property was repurposed for commercial use. The redevelopment involved the demolition of the Kop-Flex facility buildings and construction of two structures, designated the North Building and South Building, separated by a truck loading dock area. Paragon BioServices, a Baltimore-area biopharmaceutical company, began leasing the property in 2018 and modifying the building interiors for future operations. As of late 2019, Paragon BioServices has moved into the two buildings and initiated business operations. In addition, Paragon BioServices was acquired by Catalent Pharma Solutions in 2019.

Much of the broader neighborhood in which the Site is located is primarily characterized by residential developments (single-family homes and townhouses) and undeveloped land. A small number of areas, primarily to the north and east, are subject to commercial and light industrial/industrial park uses. The following table summarizes the nearby land uses.

Direction	Operator Name	Address	Property Use
North	Verizon	7545 Harmans Road	Maintenance Facility
South	William Scotsman, beyond which is Maryland State Route 100	7539 Harmans Road	Mobile Trailer Distributor – Trailer Storage
East	William Scotsman, beyond which are railroad tracks	7539 Harmans Road	Mobile Trailer Distributor – Office/Fabrication Building and Trailer Storage
West	Stony Run with surrounding undeveloped land and Harmans Preserve town home community	-----	Open space and residences

3 ENVIRONMENTAL SETTING

3.1 TOPOGRAPHY AND SURFACE DRAINAGE

Anne Arundel County is located within the Atlantic Coastal Plain Physiographic Province. The Hanover area is situated approximately five miles from the Fall Line, which marks the boundary at the ground surface between the unconsolidated deposits of the Coastal Plain and the igneous and metamorphic crystalline rocks of the Piedmont Physiographic Province. Based on the United States Geological Survey (USGS) topographic 7.5-minute series quadrangle map for Relay, Maryland (revised 1974), the site lies within an area of rolling to hilly terrain dissected by numerous perennial to intermittent streams. Overall, the highest elevations (greater than 200 feet above mean sea level [MSL]) occur in the Severn area south and west of the former Kop-Flex facility with the lowest area (approximately 90 feet above MSL) present to the north along Stony Run.

According to the USGS topographic map, the closest stream is Stony Run, which flows across the northwestern portion of the former Kop-Flex facility property. Streamflow associated with the Stony Run drainage system progresses northward and eventually discharges into the Patapsco River. Additionally, numerous small, predominately man-made pond areas have been identified and mapped in the vicinity of Stony Run and its tributaries in the Hanover-Severn area. The largest of these is a hydrologically isolated pond located approximately 0.3 mile south of the site in the Harmans Woods community.

3.2 LOCAL GEOLOGY

Evaluation of the borehole lithologic data, considering the regional stratigraphic framework, indicates the predominant unconsolidated deposits in the Hanover-Severn area include units of the Lower Cretaceous Potomac Group. The most detailed lithologic information is provided by the logging of cores obtained from boreholes drilled by WSP for the offsite monitoring wells installed in 2014 and 2018 (Figure 2). Based on this data, the following discussion provides an overview of the geologic conditions in the onsite and offsite areas.

The upper-most inter-bedded sand and clay sediment at the former facility property and adjacent parcels are a combination of Quaternary alluvial sediments associated with the depositional processes along the Stony Run drainage system and fill materials associated with historical site activities. Based on the boring logs, the maximum thickness of these surficial deposits is approximately 20 feet (Figure 2).

Lower Cretaceous litho-stratigraphic units underlie the surficial deposits down to an elevation of greater than -200 feet MSL. The primary Cretaceous-age units of interest beneath the former Kop-Flex facility and offsite area to the south include the following:

- Patapsco Formation (Lower Patapsco Aquifer and Confining Unit)
- Arundel Clay
- Patuxent Formation (Patuxent Aquifer)

Specific information on these aquifers, shown in Figure 2, and the Arundel Clay is provided in the following section.

3.3 LOCAL HYDROGEOLOGY

3.3.1 LOWER PATAPSCO AQUIFER

The Lower Patapsco aquifer extends over the entire area of interest and ranges in thickness from approximately 180 feet at the southern boundary of the Kop-Flex property to approximately 300 feet in the residential areas south of Reece Road. The aquifer in the area of interest is comprised of zones of mostly fine to coarse-grained sands, which are interbedded with layers of predominately clay deposits of varying thickness. Based on the borehole lithologic data, two regionally extensive clayey layers occur within the aquifer unit (Figure 2). The fine-grained sediments comprising the deeper of these units extends from the Site down-dip to the south and east and serves as both a confining unit for the lower portion of the Lower Patapsco aquifer and a low permeability barrier limiting the diffusive flux of volatile constituents to the upper portion of the aquifer. The thickness of this deep sand zone varies from approximately 90 feet at the Kop-Flex property to 130 feet further downgradient in the Andorick Acres neighborhood, with deeper depths as one moves further downgradient from the site.

Evaluation of the water level data from offsite monitoring wells and selected residential wells indicates an unconfined groundwater condition in the upper and middle sand zones, with the general direction of groundwater flow following the surface topography toward local streams. Groundwater occurs under semi-confined conditions within the deep sand deposits. Evaluation of the hydraulic head data indicates a generally south-southeast flow path for groundwater in the semi-confined sand zone within the aquifer. Vertical head differences indicate a downward component of flow across the confining layer for the deep sand zone over the area of interest. The majority of the offsite monitoring wells for this project are screened within the semi-confined portion of the Lower Patapsco aquifer.

3.3.2 ARUNDEL CLAY

The Arundel Clay underlies the Lower Patapsco aquifer. This unit consists predominately of clay that ranges in color from gray to dark gray and red to very dark brown, with rare beds of well-graded sand. Organic (plant) matter is present throughout much of the clayey deposits comprising this litho-stratigraphic unit in the offsite area. Based on the lithologic logs for offsite wells that were advanced through the Arundel Clay and into the underlying Patuxent Aquifer (MW-30D-413, and MW-36D; Figure 2), the approximate thickness for this unit ranges from 90 feet to 130 feet over the Hanover-Severn area.

3.3.3 PATUXENT AQUIFER

The Patuxent aquifer is the deepest aquifer encountered in the Severn area, and comprises the porous sand deposits of the Patuxent Formation underlying the Arundel Clay. Detailed information on the texture and thickness of this hydrogeologic unit is minimal in the area of interest due to the limited advancement of well boreholes into this aquifer. Based on regional studies, the Patuxent aquifer is believed to approach a thickness of approximately 250 feet in western Anne Arundel County. Prior to the 2018 well installation activities, no monitoring wells had been completed in the Patuxent aquifer as part of the offsite groundwater investigation activities. The deeper well at the MW-30D location, as well as MW-36D (Figure 2), were installed beneath the Arundel Clay to provide more hydrogeologic and geochemical information from this aquifer.

4 MONITORING WELL ABANDONMENT ACTIVITIES

Pursuant to the approval from MDE and the United States Environmental Protection Agency (USEPA), the shallow monitoring wells installed at the MW-25 and MW-28 locations in the Harmans Woods neighborhood were abandoned in place on August 6, 2019. The locations of the MW-25 well cluster and MW-28 well pair are shown on Figure 3. The monitoring well decommissioning was performed by a licensed Maryland driller from A-Zone Environmental Services, and in accordance with the procedures specified in the Maryland well abandonment standards. The wells were sealed with a bentonite-grout slurry pumped down the casing using a tremie pipe. The surface was then finished with asphalt patch to match the surrounding road surface conditions. Copies of the well abandonment forms that were submitted to the MDE are provided in Appendix A.

5 GROUNDWATER MONITORING PLAN AND FIELD PROCEDURES

5.1 OVERVIEW OF GROUNDWATER SAMPLING ACTIVITIES

5.1.1 PLAN-REQUIRED MONITORING EVENTS

Offsite groundwater monitoring activities were conducted during each quarter of 2019. The monitoring activities completed during the 1st, 2nd, and 4th quarters involved the collection of groundwater quality samples from all or selected offsite monitoring wells. The 3rd quarter activities consisted of water level measurements at all offsite monitoring wells and collection of groundwater samples for evaluation of natural attenuation, in addition to the shallow monitoring well abandonment activities discussed in the previous section. Additional information regarding the quarterly 2019 monitoring activities is provided below.

During the 1st quarter, water level measurements were collected from all offsite monitoring wells, with groundwater samples collected from the six offsite wells installed in the spring of 2018 - MW-29D, MW-30D-273, MW-30D-413, MW-32D, MW-34D, and MW-36D. This 1st quarter event comprised the final quarterly sampling event for these newly installed offsite wells in accordance with the 2015 Offsite Groundwater Monitoring Plan (GWMP). Following this event, all offsite monitoring wells, with the exception of MW-45 on the William-Scotsman property, moved to a semi-annual sampling schedule.

The 2nd quarter of 2019 marked the first semi-annual groundwater monitoring event of 2019 pursuant to the approved Offsite GWMP. For this event, groundwater quality samples were collected from all offsite monitoring wells, including shallow well MW-45. Water level measurements were also collected from all offsite monitoring wells.

In accordance with the monitoring frequency in the Offsite GWMP, no groundwater quality sampling was conducted during the 3rd quarter 2019. WSP did collect water level measurements from all offsite monitoring wells to gather additional data on the potentiometric heads for the confined portion of the Lower Patapsco aquifer and Patuxent aquifers in the offsite area.

The fourth quarter 2019 sampling represented the second semi-annual groundwater monitoring event of 2019. During this event, groundwater quality samples were collected from the deep offsite monitoring wells. Water level measurements were also collected from all offsite wells, including shallow well MW-45.

5.1.2 ADDITIONAL SAMPLING ACTIVITIES

Based on a desire to gather site-specific information on the fate and transport of constituents of concern (COCs) within the impacted portion of the Lower Patapsco aquifer, WSP conducted groundwater sampling at monitoring wells located within the plume area in the 3rd quarter of 2019 as part of a monitored natural attenuation (MNA) evaluation. A description of these sampling activities is provided in section 7 of this report.

5.2 WATER LEVEL MEASUREMENTS

Field measurements at the offsite monitoring wells were obtained during each sampling event using an electronic water level indicator. Static water level and total well depth measurements were taken at each monitoring well to determine fluctuations

in the hydraulic head within the portion of the aquifer system screened by the well and identify potential siltation problems inside the well casing. All field measurements were recorded in a bound field notebook. Historical water level measurements for the offsite monitoring wells, including data from the 2019 gauging events, are included in Table 2.

5.3 HYDRASLEEVE SAMPLING

The HydraSleeve™ sampling method was used to collect groundwater samples from the offsite monitoring wells in 2019. The HydraSleeve™ is a passive sampling device capable of collecting representative groundwater samples for analysis of VOCs and 1,4-dioxane. The depth intervals for deployment of the HydraSleeve™ samplers in the offsite wells are provided in Table 3.

The 2.5-foot long HydraSleeve™ sampler was attached to a weighted, nylon suspension tether and set at the pre-determined depth within the screened interval. The suspension line was then secured at the well head to ensure the sampler remains at the designated depth during the stabilization period. Following equilibration, the groundwater sample was collected by continuously pulling upward on the HydraSleeve™ until full. The HydraSleeve™ was removed from the well, and the sample immediately collected in the appropriate containers to minimize the diffusive loss of VOCs through the polyethylene wall of the sampler. After obtaining the requisite sample volume for chemical analysis, a representative amount of the remaining water was placed into the sample cup of a Horiba U-52 multi-parameter field meter for measurement of the following hydrogeochemical parameters:

- Temperature
- pH
- Specific conductivity
- Turbidity

The field parameter measurements for each sample were documented in a field notebook. Table 4 summarizes the field parameter measurements for the 2019 sampling events. There were some instances where the HydraSleeve™ did not provide enough groundwater for the field parameters measurements. These occurrences are marked as “not measured” in Table 4.

Following sample collection, a new HydraSleeve™ sampler was deployed in each well for the next sampling event.

5.4 ANALYTICAL METHODS

All groundwater samples were analyzed by the Pace Analytical Services (Pace) laboratory in Huntersville, North Carolina for VOCs using U.S. EPA SW-846 Test Method 8260B. In addition, the samples were analyzed for 1,4-dioxane using modified U.S. EPA Method 8260B with selected ion monitoring (SIM). These test methods were also used for field quality control (QC) samples – i.e., trip blanks and duplicate samples.

6 2019 GROUNDWATER MONITORING RESULTS

6.1 GROUNDWATER QUALITY STANDARDS FOR SITE-RELATED VOCS

The comparative criteria for all site-related COCs, excluding 1,4-dioxane, detected in the offsite area are equivalent to the current (October 2018) MDE groundwater quality standards listed below.

- 1,1,1-Trichloroethane (TCA) – 200 micrograms per liter (µg/l)
- 1,1-Dichloroethene (DCE) – 7 µg/l
- 1,2-Dichloroethane (DCA) – 5 µg/l
- 1,1-DCA – 2.8 µg/l
- cis-1,2-DCE – 70 µg/l
- Trichloroethene (TCE) – 5 µg/l

These values correspond to the standards for Type I and II aquifers, and, with the exception of 1,1-DCA, are consistent with the maximum contaminant levels (MCLs) and secondary MCLs developed by the U.S. EPA under the Safe Drinking Water Act. Based on the site hydrogeologic and hydrogeochemical data, the Lower Patapsco aquifer and Patuxent aquifer meet the definition of a Type I aquifer provided in the MDE document *Cleanup Standards for Soil and Groundwater, Interim Final Guidance* (Update No. 3).

At present, no groundwater quality standard has been promulgated by MDE or U.S. EPA for 1,4-dioxane. Using the current default exposure factors developed by U.S. EPA and a target cancer risk of 1E-5, MDE has used a calculated risk-based groundwater criterion for 1,4-dioxane of 4.6 µg/l with respect to the plume emanating from the former Kop-Flex facility property. WSP has used this risk-based level to evaluate the extent of impacted groundwater for the offsite area.

The following sections discuss the analytical results for each sampling event, with the primary focus on the site-related COCs listed above. The 2019 analytical results for all offsite monitoring wells are summarized in Table 5 and shown on Figure 4. Certified laboratory reports for each sampling event are included in Appendix B.

6.2 RESULTS OF QUARTERLY SAMPLING EVENTS

6.2.1 1ST QUARTER 2019

On February 19, 2019, groundwater samples were collected from the six offsite monitoring wells installed in 2018 (MW-29D, MW-30D-273, MW-30D-413, MW32D, MW-34D, and MW-36D). As part of the monitoring event, WSP also obtained water level measurements from all deep offsite monitoring wells, with the exception of MW-46D on the Verizon property north of the Site. This well was not accessible because a vehicle was parked over the at-grade well cover on the day of the event. The water level collected from the monitoring wells is provided in Table 2.

For the wells screened in the confined Lower Patapsco aquifer, site-related COCs were only detected in the groundwater sample from MW-30D-273. The concentrations of chlorinated VOCs and 1,4-dioxane in the February 2019 sample are

similar to the levels detected in the August 2018 and November 2018 sampling events (Table 5). No chlorinated VOCs or 1,4-dioxane were detected in the remaining confined Lower Patapsco monitoring wells sampled in February 2019.

Monitoring well MW-36D installed in the eastern portion of the Harmans Woods neighborhood, and the deeper well (413 feet below ground surface [BGS]) at the MW-30D location are screened in the Patuxent aquifer below the Arundel Clay. Consistent with the previous sampling events in 2018, no site-related VOCs or 1,4-dioxane were detected in the samples from these wells (Table 5 and Figure 4).

6.2.2 2ND QUARTER 2019

Groundwater samples and water level measurements were collected from all offsite monitoring wells, except for shallow wells MW-25 and MW-28 which are screened in the unconfined portion of the Lower Patapsco aquifer in the residential area south of the Site, on May 21 and 22, 2019. This sampling event represented the first semi-annual groundwater monitoring event of 2019. Water level measurements for this sampling event are provided in Table 2. No measurement is included for well MW-33D-295 in Table 2 due to an error in recording the depth to water reading in the field.

For the confined Lower Patapsco aquifer, the concentrations of the site-related VOCs and 1,4-dioxane in the May 2019 groundwater samples are generally similar to the levels detected during previous monitoring events. Site-related constituents were detected in the sample collected from well MW-46D on the Verizon property to the north of the former Kop-Flex facility, with a total VOC + 1,4-dioxane level of 249.3 µg/l. The concentrations of 1,1-DCE (125 µg/l) and 1,4-dioxane (88 µg/l) exceeded their respective numerical criteria. In the offsite area to the south, the sample from monitoring well MW-24D on the Williams-Scotsman property had the highest concentration of site-related COCs (1,633.2 µg/l). Further downgradient, a total concentration of site-related COCs of 142.5 µg/l was detected in the MW-25D-130 sample, which is higher than the concentrations in the sample (108.7 µg/l) and its duplicate (100.6 µg/l) from the deeper well (MW-25D-192) at this location. Most of the sampling data for the confined Lower Patapsco monitoring wells located further downgradient indicate non-detect to very low concentrations of site-related COCs (Figure 4). The only exception is the sample from the well installed at the MW-30D location near the intersection of Old Camp Meade Road and Twin Oaks Road. The groundwater from this well, MW-30D-273, had concentrations of 1,1-DCE of 44.2 µg/l and 1,4-dioxane of 22.7 µg/l similar to previous sampling events. Both of these levels exceed their respective groundwater quality criteria for the aquifer. Additionally, the 1,4-dioxane concentration in the MW-33D-295 sample (6.1 µg/l) was above the criterion of 4.6 µg/l.

As with the February sampling event, no site-related VOCs or 1,4-dioxane were detected in the samples from wells MW-30D-413 or MW-36, which are screened in the Patuxent aquifer (Table 5 and Figure 4).

6.2.3 4TH QUARTER 2019

Fourth quarter groundwater samples and water level measurements were collected from all offsite monitoring wells screened in the confined Lower Patapsco aquifer and Patuxent aquifer on November 19-20, 2019. All depth to water measurements in the offsite monitoring wells are provided in Table 2.

For the confined Lower Patapsco aquifer, the concentrations of the site-related VOCs and 1,4-dioxane in the groundwater samples are consistent with the levels detected during the previous 2019 monitoring events, with a few minor exceptions. As with previous sampling events, site-related COCs were detected in the sample collected from well MW-46D on the Verizon property, with a total VOC + 1,4-dioxane concentration of 235.1 µg/l. To the south, the analytical data indicated the presence of site-related constituents just over one mile hydraulically downgradient of the former Kop-Flex property. The sample from monitoring well MW-24D on the adjoining Williams-Scotsman property had the highest concentration of site-related COCs (1,094 µg/l), although the levels of 1,1-DCE and 1,4-dioxane exhibited a noticeable decrease from the concentration ‘spike’ detected during the May 2019 sampling round (see Table 5). Further downgradient, a total concentration of site-related

COCs of 95.7 µg/l was detected in the MW-25D-130 sample, which is lower than the concentrations in the sample (106.9 µg/l) and its duplicate (124.8 µg/l) from the deeper well (MW-25D-192) at this location. Most of the sampling data for the confined Lower Patapsco monitoring wells located further downgradient indicate non-detect to very low concentrations of site-related COCs (Figure 4). As seen previously, the only exception is the sample from the well screened from 263-273 ft BGS at the MW-30D location. The groundwater sample from this well (MW-30D-273) had a 1,1-DCE concentration of 43.1 µg/l and 1,4-dioxane of 22.8 µg/l. Both of these levels are similar to previous sampling events and exceed the groundwater quality criteria for the aquifer of 7 µg/l for 1,1-DCE and 4.6 µg/l for 1,4-dioxane. Additionally, the 1,4-dioxane concentration in the MW-33D-295 sample (6.3 µg/l) was above the numerical criterion.

Consistent with the other 2019 sampling events, no site-related VOCs or 1,4-dioxane were detected in the samples from well MW-36D and the deeper (413-foot BGS) well at the MW-30D location, indicating COCs have not migrated downward through the Arundel Clay confining unit that hydraulically separates the Lower Patapsco and Patuxent aquifers.

7 EVALUATION OF NATURAL ATTENUATION PROCESSES FOR PRIMARY OFFSITE CONTAMINANTS

7.1 FIELD SAMPLING AND ANALYSIS

From August 7-9, 2019, WSP collected groundwater samples from five deep offsite monitoring wells (Figure 3) to characterize the chemical and microbial characteristics of the affected groundwater as they relate to the natural attenuation of 1,1-DCE and 1,4-dioxane. The wells were selected to evaluate variability in the characteristics of the offsite groundwater in the direction of groundwater flow in the confined portion of the Lower Patapsco aquifer, and includes locations with detectable concentrations of COCs at various distances from the source area (*i.e.*, former Kop-Flex facility). The rationale for selecting each monitoring well location is provided below.

Location	**Rationale**
MW-24D	Immediately downgradient of the Kop-Flex property, maximum COC concentrations in deep groundwater
MW-25D-130	Center of the Offsite plume, same location as MW-25D-192, screened in the upper portion of the confined portion of the Lower Patapsco aquifer
MW-25D-192	Center of the Offsite plume, same location as MW-25D-130, screened in the lower portion of the confined portion of the Lower Patapsco aquifer
MW-30D-273	Middle to downgradient edge of the Offsite plume
MW-33D-295	Furthest downgradient well with the lowest detectable COC concentrations

WSP obtained water level measurements from the deep offsite monitoring wells as part of the sampling activities. The data and the corresponding water level elevations are provided in Table 2.

Groundwater characterization parameters for the MNA evaluation were selected based on their appropriateness for the hydrogeochemical conditions in this portion of the aquifer system. The characterization groundwater samples collected from the 5 selected locations were analyzed for the following:

- Field parameters: pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), conductivity, and turbidity.
- VOCs by U.S. EPA Method 8260B and 1,4-dioxane by EPA Method 8260 with SIM performed by Pace.
- Natural attenuation parameters: alkalinity by Method SM2320B, chloride by Method 4500-CLE, sulfate by U.S. EPA Method 300.0, sulfide by EPA Method 4500, and dissolved gases (ethene, ethane, and methane) by Method RSK-175 performed by Pace, and field analyses of ferrous and total iron using HACH Method 8146.
- Deoxyribonucleic acid (DNA) -based diagnostics of oxygenase enzymes that have been found to react co-metabolically with both 1,1-DCE and 1,4-dioxane, including *Soluble Methane Monooxygenase* (SMMO), *Propane Monooxygenase* (PPO), *Toluene Monooxygenase* (RMO), and *Toluene Monooxygenase 2* (RDEG) performed by Microbial Insights in Knoxville, Tennessee.
- Radioactive carbon isotope (^{14}C) assay measuring the degradation of radiolabeled 1,4-dioxane spiked into site groundwater performed by Clemson University in partnership with Microbial Insights. A ^{14}C assay has not yet been developed for 1,1-DCE and therefore this analysis was not performed for 1,1-DCE.

Samples for VOC and 1,4-dioxane analyses were collected using HydraSleeve™ samplers, which is consistent with the method in use for the offsite groundwater monitoring program (see Section 5.3). The remaining parameters were collected using the low flow purging method in accordance with WSP standard operating procedures (SOPs). After the samples were collected, new HydraSleeve™ samplers were deployed in the monitoring locations for sample collection during the next semi-annual monitoring event.

The low-flow groundwater sampling procedure is designed to minimize the amount of water generated during the well purging. Using this method, each well was purged and sampled at a pumping rate of approximately 100 to 200 milliliters per minute using a bladder pump equipped with a disposable polyethylene bladder. During purging, field measurements of groundwater temperature, pH, specific conductance, dissolved oxygen, ORP, and turbidity, were monitored and recorded using a multi-parameter, water quality meter equipped with a flow-through cell to minimize changes in the water chemistry due to contact with the surface (atmospheric) conditions. Depth to water measurements were collected throughout sampling to track water column drawdown in the well and flow rates were decreased if necessary to minimize drawdown. Groundwater samples were collected following the stabilization of the field chemistry parameters in accordance with WSP's Standard Operating Procedures. After completion of the purging activities, groundwater samples were collected for laboratory analysis, and total and ferrous iron were measured in the field. Copies of the low flow sampling forms are provided in Appendix C.

All analyses were completed on a standard turnaround time. The standard turnaround time varied from 2 weeks (most parameters) to over 6 weeks (^{14}C assays).

7.2 EVALUATION OF SAMPLING DATA

7.2.1 CHEMICAL AND MICROBIOLOGICAL ANALYSES

The analytical results are provided in Appendix B and summarized in Table 6. Six VOCs were detected in groundwater samples, and four of the detected VOCs were measured at concentrations above their respective groundwater cleanup standards: 1,1-DCE, 1,1-DCA, 1,2-DCE, and 1,4-dioxane. 1,4-dioxane was detected above the groundwater quality standard of 4.6 µg/l in all 5 samples, while 1,1-DCE was detected above the groundwater quality standard of 7 µg/l in all samples except for the location furthest downgradient within the VOC plume, MW-33D-295. Location MW-24D, which is the closest deep offsite well to the former Kop-flex facility, had the highest number of VOC detections (4 compounds) and highest magnitude of VOC concentrations (total VOC concentration 1,182.5 µg/l). The magnitude of the site-related VOCs decreases with distance from the former Kop-Flex facility. The groundwater sample collected at MW-33D-295, the furthest downgradient monitoring well, contained only 2 site-related VOCs, 1,1-DCE and 1,4-dioxane, at very low concentrations of 4.5 µg/l and 6.0 µg/l, respectively. As described in Section 8.2, operation of the hydraulic containment system has resulted in a notable decrease in VOC concentrations immediately downgradient of the former Kop-Flex facility in MW-24D. The concentrations of site VOCs in samples from off-site wells generally appear to be stable or exhibit a slight decreasing trend.

The dissolved gases (ethene, ethane, and methane) were not detected in any of the samples and the study found low concentrations of alkalinity, chloride, sulfate, and ferrous and total iron. These parameters were most prevalent at MW-24D and decreased with distance downgradient from the former Kop-Flex facility. Ferrous and total iron were also identified in all groundwater samples at low concentrations ranging from 1.48 milligrams per liter (mg/l) for ferrous iron and 2.43 mg/l for total iron at MW-30D-273 to 0.03 mg/l for both ferrous and total iron at MW-25D-192. The field monitoring indicated oxidizing conditions are prevalent (minimum DO concentration of 2.98 mg/l and minimum ORP measurement of 372 mV) and therefore indicating limited potential for reductive dichlorination of chlorinated VOCs.

Two of the oxygenase enzymes, PPO and RDEG, were detected above the method detection limit in all five samples. SMMO and RMO were not detected in any of the samples. The highest concentrations of PPO and RDEG were detected at MW-33D-295, the furthest downgradient location with the lowest VOCs. The lowest concentrations were detected at MW-24D, the location with the highest VOCs and closest to the former Kop-Flex facility. The presence of these enzymes in the groundwater samples confirms the potential for co-metabolic degradation of 1,1-DCE and 1,4-dioxane; however, the low concentrations suggest the mechanism may be limited.

7.2.2 DEGRADATION RATE ANALYSIS USING ^{14}C ASSAYS

When the samples for the carbon isotope analysis were received at Clemson University, purified ^{14}C-1,4-dioxane was added to the sample containers. Filter-sterilized groundwater controls (controls) containing ^{14}C-1,4-dioxane were also prepared for each sample. The samples were analyzed for ^{14}C degradation products at baseline (immediately after incubation) and after 6 weeks of incubation. A first order degradation rate constant was calculated using the mass balance for total ^{14}C degradation products present in each sample. If the rate constant for the groundwater sample exceeded the rate constant for the corresponding control, a net rate was calculated by subtracting the control rate.

The calculated rate constants and corresponding 95% confidence intervals are provided in Table 6 for the samples collected after 6 weeks of incubation. The estimated rate constants exceeded the corresponding control rate constants for locations MW-24 and MW-30D-273. Net rates were calculated at these locations, but the 95% confidence interval for the net rate was higher than the rate itself, indicating that the net rate is not statistically different from zero. For the remaining samples (MW-25D-130, MW-25D-192, and MW-33D-295), the calculated rate constant for the control was higher than for the groundwater samples, so a net rate was not estimated.

The net degradation rate constants were not statistically significant after 6 weeks of incubation (e.g., rate of less than 0.01 per year), suggesting either a) the incubation period was not long enough to measure the rate, or b) the degradation rate was too limited to measure. Therefore, the incubation period was extended, and the 1,4-dioxane concentrations in the samples rechecked after approximately 7 months. No significant changes were noted in the 1,4-dioxane concentrations between the 6-week and 7-month incubation periods. The lack of significant changes in 1,4-dioxane concentrations demonstrates the degradation rate is too limited to measure using this method.

7.3 CONCLUSIONS

The evaluation of chemical and microbiological data indicates the potential for natural attenuation of site-related COCs in the offsite groundwater, although these mechanisms may be limited due to the low concentrations of VOCs and oxygenase enzymes. The PPO and RDEG enzymes capable of co-metabolic degradation of 1,1-DCE and 1,4-dioxane were present in all five samples, but at low concentrations. The ^{14}C assays did not provide conclusive information on a degradation rate constant through the 7-month incubation period, indicating that if natural degradation is occurring the rate is not significant enough to measure.

8 SUMMARY AND CONCLUSIONS

8.1 COC DISTRIBUTION

The overall direction of groundwater flow, and associated migration of dissolved VOCs in the confined portion of the Lower Patapsco aquifer is to the south/southeast from the site. Potentiometric surface contour maps showing the direction of groundwater flow within this hydrogeologic unit based on water level data from the May 2019 and November 2019 sampling events can be found in Figures 5 and 6, respectively.

The two, primary site-related COCs in the offsite groundwater are 1,1 DCE and 1,4-dioxane. Based on historical analytical data, the presence of 1,1-DCE and 1,4-dioxane (and other site-related constituents) is limited to the deeper (confined) portion of the Lower Patapsco aquifer. The concentrations of the site-related VOCs and 1,4-dioxane were generally consistent across the different rounds of sampling performed in 2019. Wells MW-24D and MW-25D-130, which are the closest downgradient monitoring points to the deep recovery wells, offer the only exceptions to the apparent constancy in the groundwater impacts within the offsite plume.

The iso-concentration maps shown in Figures 7 and 8, depict the inferred horizontal extent of the 1,1 DCE and 1,4-dioxane plumes within the confined portion of the Lower Patapsco aquifer based on data from the November 2019 sampling event. These iso-concentration maps include data for the onsite monitoring wells to get a better sense of the constituent distribution within the aquifer. Overall, in the area south of MD Route 100, the inferred extents of these COCs within the aquifer are similar to the distributions determined from the 2018 monitoring data, with no apparent change in the plume width or downgradient extent of the leading edge of the plume area. However, in the area north of Route 100, the plume width appears to have narrowed when compared to the 2018 data. The offsite wells containing the highest site-related VOC concentrations - MW-24D on the William Scotsman property and MW-25D well pair in the Harmans Woods residential community - are located less than ¼ mile south (hydraulically downgradient) of the former Kop-Flex facility. Other offsite monitoring wells south of Route 100 that have repeatedly contained 1,1 DCE and 1,4-dioxane above the applicable groundwater quality criteria in the 2019 samples are MW-30D-273 and MW-33D-295. The sample results for the remaining wells delineate both the presumed width as well as the downgradient extent of the plume in the confined Lower Patapsco aquifer.

In regard to vertical distribution of site-related VOCs within the various aquifers, evaluation of the sampling data indicates the confined portion of the Lower Patapsco Aquifer represents the primary hydrostratigraphic interval for the migration of the COCs in the aquifer system. Historical water level data from the offsite monitoring wells consistently indicated a downward vertical flow component from the upper to lower portion of the Lower Patapsco aquifer. This groundwater flow characteristic also appears to be present within the permeable sand deposits comprising the lower (confined) portion of the aquifer, as evidenced by evaluation of the water level (Table 2) and water quality (Table 5) data for the MW-33D well pair. Even with this downward flow component, data from monitoring wells MW-30D-413 and MW-36D screened in the Patuxent aquifer had no detections of site-related COCs. These continuous non-detect sample results demonstrate that dissolved constituents comprising the plume in the confined Lower Patapsco aquifer have not migrated through the thick clayey deposits comprising the Arundel Clay confining unit to the underlying Patuxent aquifer.

8.2 COC CONCENTRATION TRENDS

Figures 9 through 13 include graphs that show concentrations of 1,1-DCE and 1,4-dioxane with respect to time (2016 through 2019) for confined zone Lower Patapsco aquifer wells located along the center-line of the plume. These plots were developed to help elucidate potential temporal trends in concentrations for these primary COCs. Given the small numbers of

samples (four) collected from well MW-46D on the Verizon property, trend analysis was not conducted on the data from this well as part of this report. A minimum of one year of additional sampling data is needed from this well to accurately examine the VOC concentrations over time at this offsite monitoring location.

The data presented in the concentration vs. time plots are for groundwater samples collected using different field methods. The low-flow sampling procedure was utilized to collect monitoring well samples through the 3rd quarter of 2016. Given the applicability of the HydraSleeve™ sampler determined from the spring/summer 2016 field demonstration study, the use of this passive sampling device was adopted in place of the low-flow sampling method. The conversion from the low-flow to passive (HydraSleeve™) method was implemented during the 4th quarter 2016 monitoring event. Since constancy in sampling-related variables is important when evaluating temporal changes in COC concentrations, the qualitative assessment of trends in 1,1-DCE and 1,4-dioxane levels in monitoring well samples only considers data for samples obtained using the HydraSleeve™ sampler (i.e., 4th quarter 2016 through 2019).

Since early 2017, COC concentrations in samples have exhibited stable trends in some plume wells, while other wells show a decrease in concentrations of 1,1 DCE and 1,4-dioxane. In particular, MW-25D-130 and MW-25D-192, have displayed a steady and constant decrease since the system startup (Figures 10 and 11). These wells are two of the closer downgradient monitoring points to the deep groundwater recovery wells and are screened in the same portion of the aquifer system as the onsite pumping wells. Thus, the apparent concentration trends indicated by samples from these monitoring wells are believed to be related to the extraction of COC-containing groundwater by the onsite hydraulic containment system. Based on this conclusion, the temporal change in COC levels suggests the hydraulic containment system is successfully removing site-related dissolved VOCs from the confined portion of the Lower Patapsco aquifer and limiting further offsite migration. Analytical data for MW-24D, which is the closest offsite monitoring point downgradient of the recovery wells, showed a slight spike in 1,1-DCE and 1,4-dioxane concentrations compared to 2018 results. For the November 2019 sampling event, the COC levels decreased back to concentrations similar to the 2017-2018 results

Over the past few years, the generally stable COC concentrations have been detected in the samples from wells MW-30D-273 and MW-33D-295, which are situated closer to the leading edge of the groundwater plume. These results indicate the plume has likely reached a stable, or steady-state, condition in this part of the offsite area. Analytical data shows concentrations from MW-30D-273 increased after the initial sampling event in May 2018 but have stabilized in the following events. The 'jump' in concentrations could be related to the initial sampling event (May 2018) taking place shortly after the well was installed in April 2018. Given the relatively short time period between installation and sampling, it is possible the hydrogeochemical conditions around the well borehole had not returned to a 'natural' state during the time of the May sampling. The stable VOC concentrations shown in MW-30D-273 from August 2018 to November 2019 further suggest the likelihood of a short-term impact to the aquifer chemistry around the well borehole.

8.3 PLANNED 2020 OFFSITE GROUNDWATER MONITORING ACTIVITIES

To date in 2020, WSP has collected water level data and groundwater samples using the passive, HydraSleeve™ sampling device from the 16 off-property monitoring wells completed in the confined Lower Patapsco and Patuxent aquifers and will continue to do so throughout the rest of the year. The process of collecting water level readings and groundwater quality samples is consistent with the procedures described in Section 5 of this report. WSP believes the existing well network is sufficient to monitor the distribution of site-related COCs in the impacted portion of the Lower Patapsco aquifer and identify potential migration of constituents downward to the underlying Patuxent aquifer.

The semi-annual groundwater sampling activities in 2020 have been and will be conducted during the 2nd and 4th quarters of 2020. Samples will be collected from all offsite monitoring wells except for MW-45 in the 2nd quarter, and all offsite wells in

the 4th quarter. No groundwater samples will be collected during the 1st and 3rd quarters of 2020. However, WSP will collect water level measurements from all offsite monitoring wells during the 1st quarter to gather additional data on the hydraulic heads within the Lower Patapsco and Patuxent Aquifers.

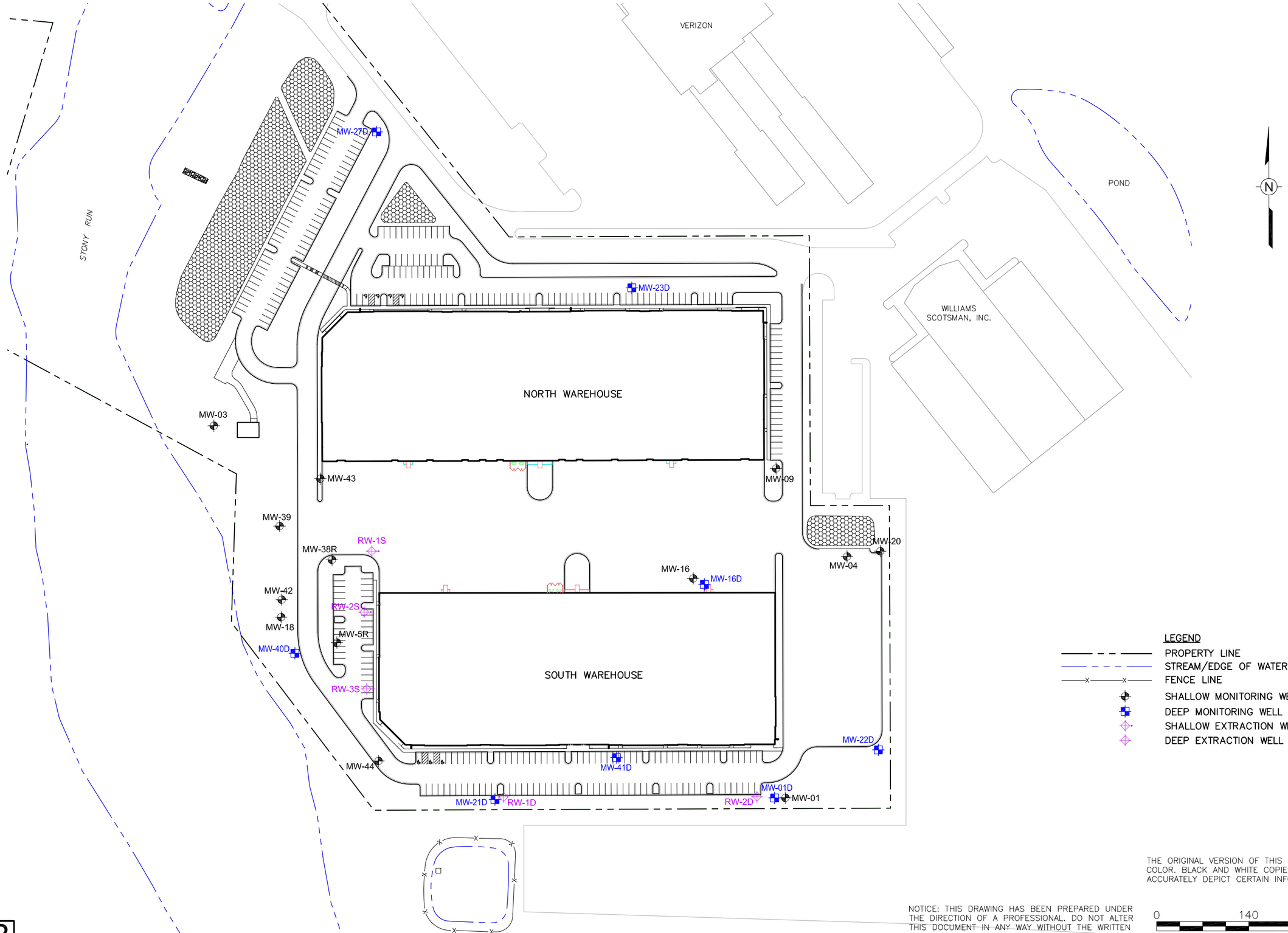
9 ACRONYMS

BGS	Below Ground Surface
COC	Constituent of Concern
DCA	Dichloroethane
DCE	Dichloroethene
DNA	Deoxyribonucleic acid
DO	Dissolved Oxygen
GWMP	Groundwater Monitoring Plan
MCL	Maximum Contaminant Levels
MDE	Maryland Department of the Environment
mg/L	Milligrams per Liter
MNA	Monitored Natural Attenuation
MSL	Mean Sea Level
MW	Monitoring Well
ORP	Oxidation Reduction Potential
PPO	Propane Monooxygenase
QC	Quality Control
RDEG	Toluene Monooxygenase 2
RMO	Toluene Monooxygenase
SIM	Selected Ion Monitoring
SMMO	Soluble Methane Monooxygenase
SOP	Standard Operating Procedure
TCA	Trichloroethane
TCE	Trichloroethene
µg/l	Micrograms per Liter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOCs	Volatile Organic Compounds

10 REFERENCES

- State of Maryland Department of the Environment Cleanup Standards for Soil and Groundwater (October 2018) Interim Final Guidance (Update No. 3)
- United States Geological Survey (USGS) topographic 7.5-minute series quadrangle map for Relay, Maryland (revised 1974)
- WSP USA (September 2015) Groundwater Monitoring Plan, Former Kop-Flex facility, Hanover, Maryland – Voluntary Cleanup Program Site #31.
- WSP USA (May 2019) Quarterly Offsite Report NO. 10 – Offsite Area, Former Kop-Flex Facility Site (January 2019 through March 2019)
- WSP USA (August 2019) Quarterly Offsite Report NO. 11 – Offsite Area, Former Kop-Flex Facility Site (April 2019 through June 2019)
- WSP USA (December 2019) Quarterly Offsite Report NO. 12 – Offsite Area, Former Kop-Flex Facility Site (July 2019 through September 2019)

FIGURES



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Checked:
Approved: 1/9/2019
DWG Name: 314V1545.011-014

FORMER KOP-FLEX FACILITY SITE
HANOVER, MARYLAND
PREPARED FOR
EMERSUB 16 LLC
ST. LOUIS, MISSOURI

FIGURE 1
KOP-FLEX SITE LAYOUT

WSP USA Inc.
13530 DULLES TECHNOLOGY DR
SUITE 300
HERNDON, VA 20171
TEL: +1 703.709.6500

B

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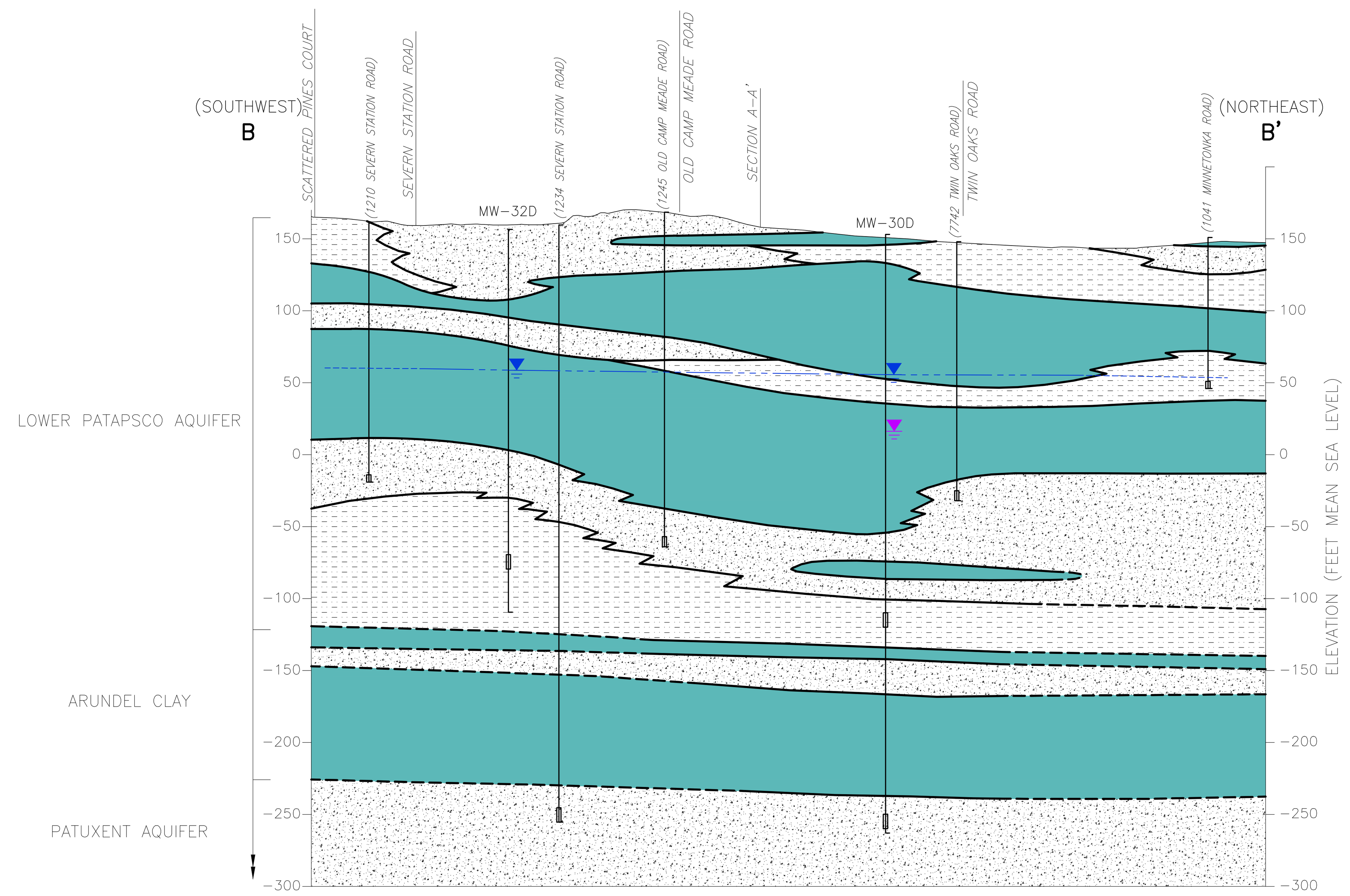


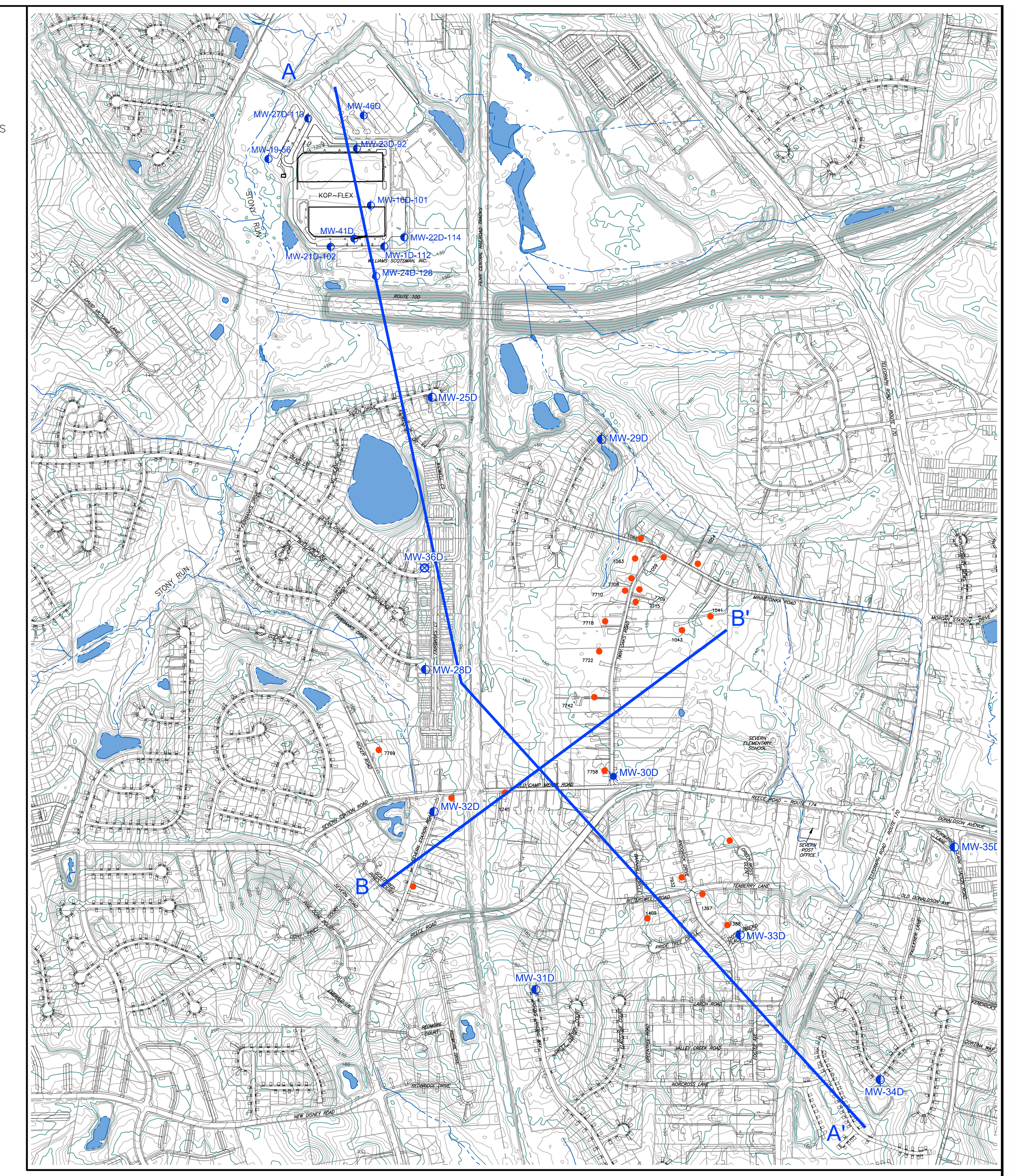
CROSS-SECTION LEGEND

- SAND
- INTERLAYERED SAND AND CLAY
- CLAY
- FILL MATERIAL
- POTENTIOMETRIC HEAD IN UPPER PORTION OF LOWER PATAPSCO AQUIFER
- POTENTIOMETRIC HEAD IN LOWER/CONFINED PORTION OF LOWER PATAPSCO AQUIFER
- POTENTIOMETRIC HEAD IN PATUXENT AQUIFER
- BOREHOLE
- SCREEN
- DECOMMISSIONED WELL
- END OF BOREHOLE
- FLOW DIRECTION IN LOWER/CONFINED PORTION OF LOWER PATAPSCO AQUIFER

NOTE:
EXISTING GRADE IS BASED ON SURFACE ELEVATION AT THE SECTION LINE NOT THE ELEVATION OF THE TOP OF THE MONITORING WELL OR BOREHOLE.

LEGEND

- PROPERTY LINE
- STREAM
- WATER BODY
- CONFINED LOWER PATAPSCO AQUIFER MONITORING WELLS
- CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
- PATUXENT AQUIFER MONITORING WELLS



CROSS SECTION LOCATION MAP
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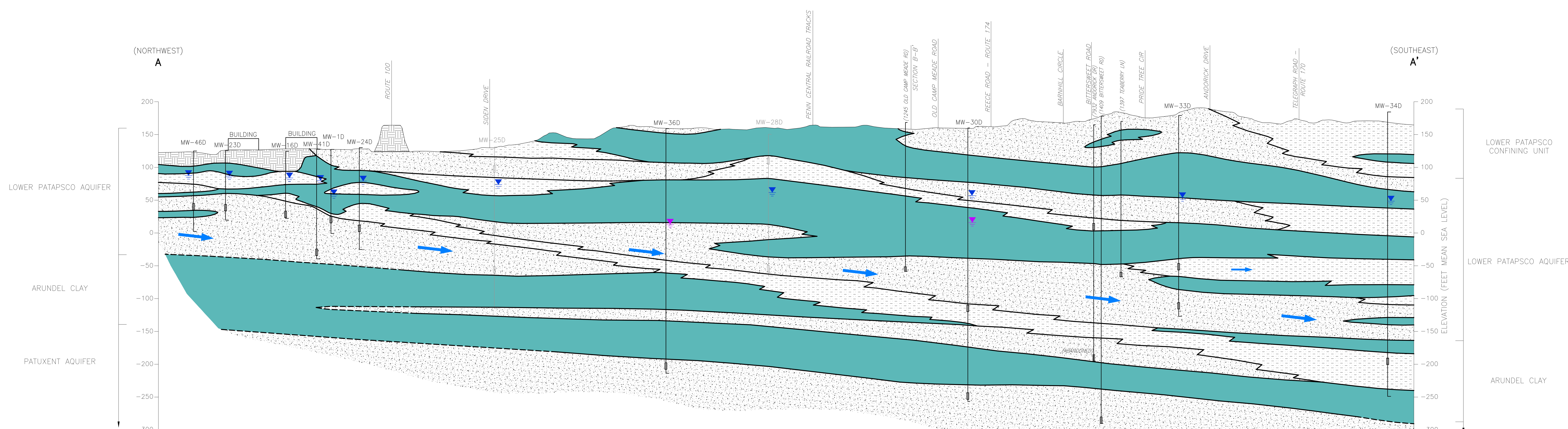

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2/5/2019

HYDROGEOLOGIC CROSS-SECTIONS AND CONCEPTUAL MODEL OF GROUNDWATER FLOW SYSTEM

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FIGURE 2

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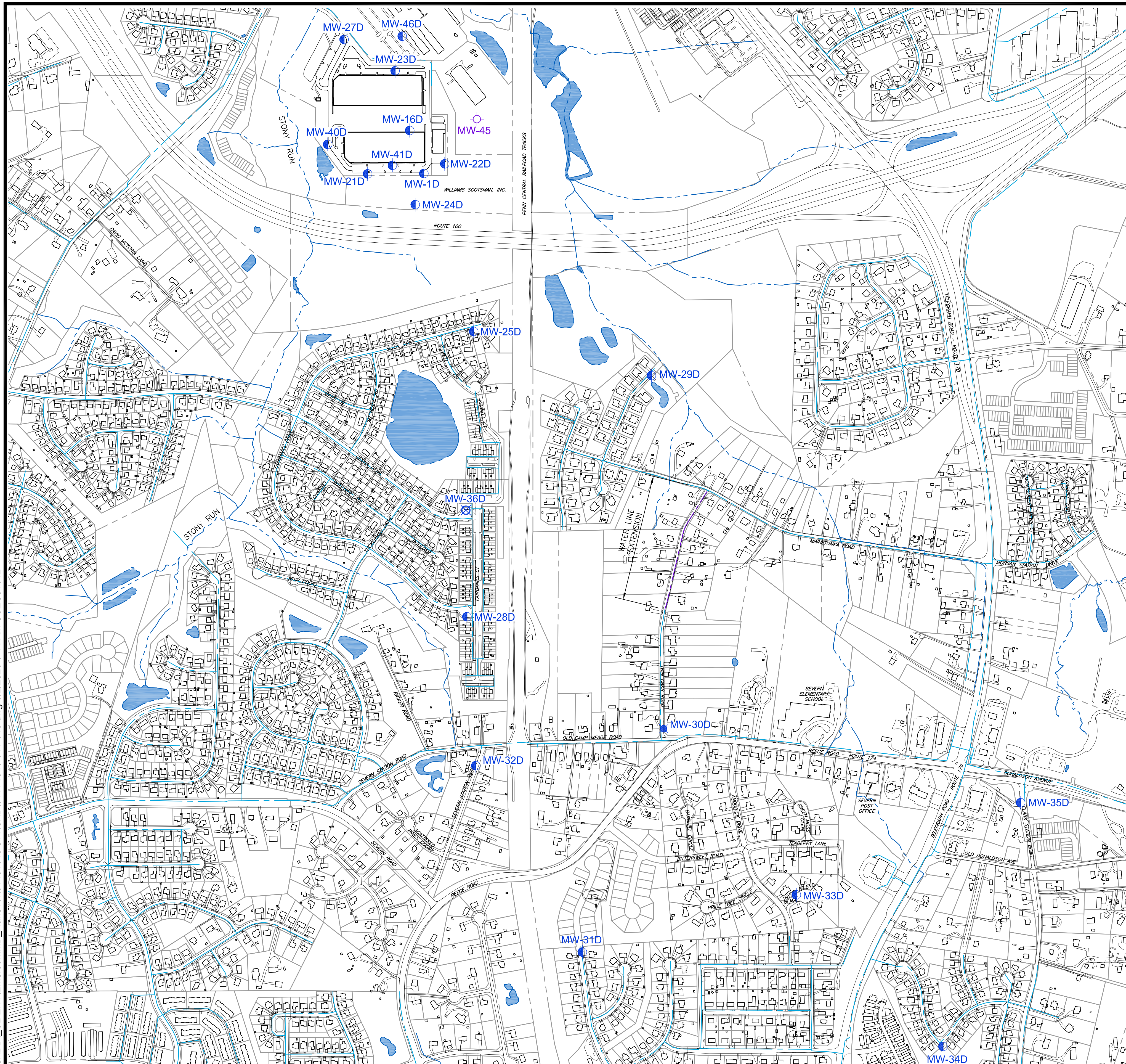

LEGEND

- PROPERTY LINE
- WATER MAIN
- WATER MAIN EXTENSION
- STREAM
- WATER BODY
- SHALLOW MONITORING WELL
- CONFINED LOWER PATAPSCO AQUIFER MONITORING WELLS
- CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
- PATUXENT AQUIFER MONITORING WELLS

N

0 800 1600

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REFERENCE: BASE FEATURES; ROADS, PARCELS, BUILDINGS, WATER FEATURES FROM ANNE ARUNDEL COUNTY WEBSITE. http://www.aacounty.org/departments/planning-and-zoning/research-and-gis/gis/

B

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Figure 3

OFFSITE MONITORING WELL LOCATIONS IN LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER

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MW-46D	May-19	Nov-19
1,1-DCA	26.1	23.4
1,2-DCA	ND	1.4
1,1-DCE	125	114
1,4-Dioxane	88	96.3
1,1,1-TCA	10.2	ND

MW-24D	May-19	Nov-19
1,1-DCA	66.2	54.5
1,2-DCA	ND	6.6
1,1-DCE	1190	868
1,4-Dioxane	359	155
PCE	ND	ND
1,1,1-TCA	5.5	10

MW-25D	May-19		Nov-19	
	120' - 130'	182' - 192'	120' - 130'	182' - 192'
1,1-DCA	3.7	11.8	2.7	13.7
1,2-DCA	1.0	1.0	1.0	ND
1,1-DCE	96.2	51.7	62.1	61
1,4-Dioxane	38.4	36.7	31	47
1,1,1-TCA	4.2	8.5	1.0	9.8

MW-29D	Feb-19	May-19	Nov-19
	141-151'	141-151'	141-151'
1,1-DCA	ND	ND	ND
1,2-DCA	ND	ND	ND
1,1-DCE	ND	ND	ND
1,4-Dioxane	ND	ND	ND
1,1,1-TCA	ND	ND	ND

MW-36D	Feb-19	May-19	Nov-19
	350-360'	350-360'	350-360'
1,1-DCA	ND	ND	ND
1,2-DCA	ND	ND	ND
1,1-DCE	ND	ND	ND
1,4-Dioxane	ND	ND	ND
1,1,1-TCA	ND	ND	ND

MW-28D	May-19	Nov-19
	200' - 210'	200' - 210'
1,1-DCA	ND	ND
1,2-DCA	ND	ND
1,1-DCE	5.2	6.1
1,4-Dioxane	3.5	3.9
1,1,1-TCA	ND	ND

MW-30D	Feb-19		May-19		Nov-19	
	263-273'	403-413'	263-273'	403-413'	263-273'	403-413'
1,1-DCA	ND	ND	1	ND	1.2	ND
1,2-DCA	ND	ND	ND	ND	ND	ND
1,1-DCE	47.2	ND	44.2	ND	43.3	ND
1,4-Dioxane	23.1	ND	22.7	ND	22.8	ND
1,1,1-TCA	ND	ND	1.7	ND	2.1	ND

MW-32D	Feb-19	May-19	Nov-19
	226-236'	226-236'	226-236'
1,1-DCA	ND	ND	ND
1,2-DCA	ND	ND	ND
1,1-DCE	ND	ND	ND
1,4-Dioxane	ND	ND	ND
1,1,1-TCA	ND	ND	ND

MW-35D	May-19	Nov-19
	288' - 298'	288' - 298'
1,1-DCA	ND	ND
1,2-DCA	ND	ND
1,1-DCE	ND	ND
1,4-Dioxane	ND	ND
1,1,1-TCA	ND	ND

MW-31D	May-19	Nov-19
	270' - 280'	270' - 280'
1,1-DCA	ND	ND
1,2-DCA	ND	ND
1,1-DCE	ND	ND
1,4-Dioxane	ND	ND
1,1,1-TCA	ND	ND

MW-33D	May-19		Nov-19	
	225' - 235'	285' - 295'	225' - 235'	285' - 295'
1,1-DCA	ND	ND	ND	ND
1,2-DCA	ND	ND	ND	ND
1,1-DCE	ND	ND	ND	4.2
1,4-Dioxane	ND	6.1	ND	6.3
1,1,1-TCA	ND	ND	ND	ND

MW-34D	Feb-19	May-19	Nov-19
	375-385'	375-385'	375-385'
1,1-DCA	ND	ND	ND
1,2-DCA	ND	ND	ND
1,1-DCE	ND	ND	ND
1,4-Dioxane	ND	ND	ND
1,1,1-TCA	ND	ND	ND

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LEGEND

- PROPERTY LINE
- WATER MAIN
- STREAM
- WATER BODY
- UNCONFINED AND CONFINED LOWER PATAPSCO AQUIFER MONITORING WELL
- CONFINED LOWER PATAPSCO AQUIFER MONITORING WELL
- PATUXENT AQUIFER MONITORING WELLS
- CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
- RECOVERY WELL

MW-25D	May-19		Nov-19	
	120' - 130'	182' - 192'	120' - 130'	182' - 192'
1,1-DCA	3.7	11.8	2.7	13.7
1,2-DCA	1.0	1.0	1.0	ND
1,1-DCE	96.2	51.7	62.1	61
1,4-Dioxane	38.4	36.7	31	47
1,1,1-TCA	4.2	8.5	1.0	9.8

- WELL IDENTIFICATION
- DATE
- SCREENED INTERVAL (FT–BGS)
- SAMPLE RESULTS IN ppb (RED INDICATES RESULTS ABOVE MDE CLEANUP STANDARDS)
- CONSTITUENTS

DCA DICHLOROETHANE
DCE DICHLOROETHENE
TCA TRICHLOROETHANE
ND NOT DETECTED

REFERENCE:
PARCEL INFORMATION OBTAINED FROM ANNE ARUNDEL COUNTY, DEPARTMENT OF PUBLIC WORKS http://gis-world2.aacounty.org/DPWcounter/countermap.html

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Figure 4
OFFSITE DEEP MONITORING WELL
ANALYTICAL DATA – 2019

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POTENTIOMETRIC SURFACE CONTOUR MAP
CONFINED PORTION OF THE LOWER PATAPSCO AQUIFER
MAY 2019

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FIGURE 5

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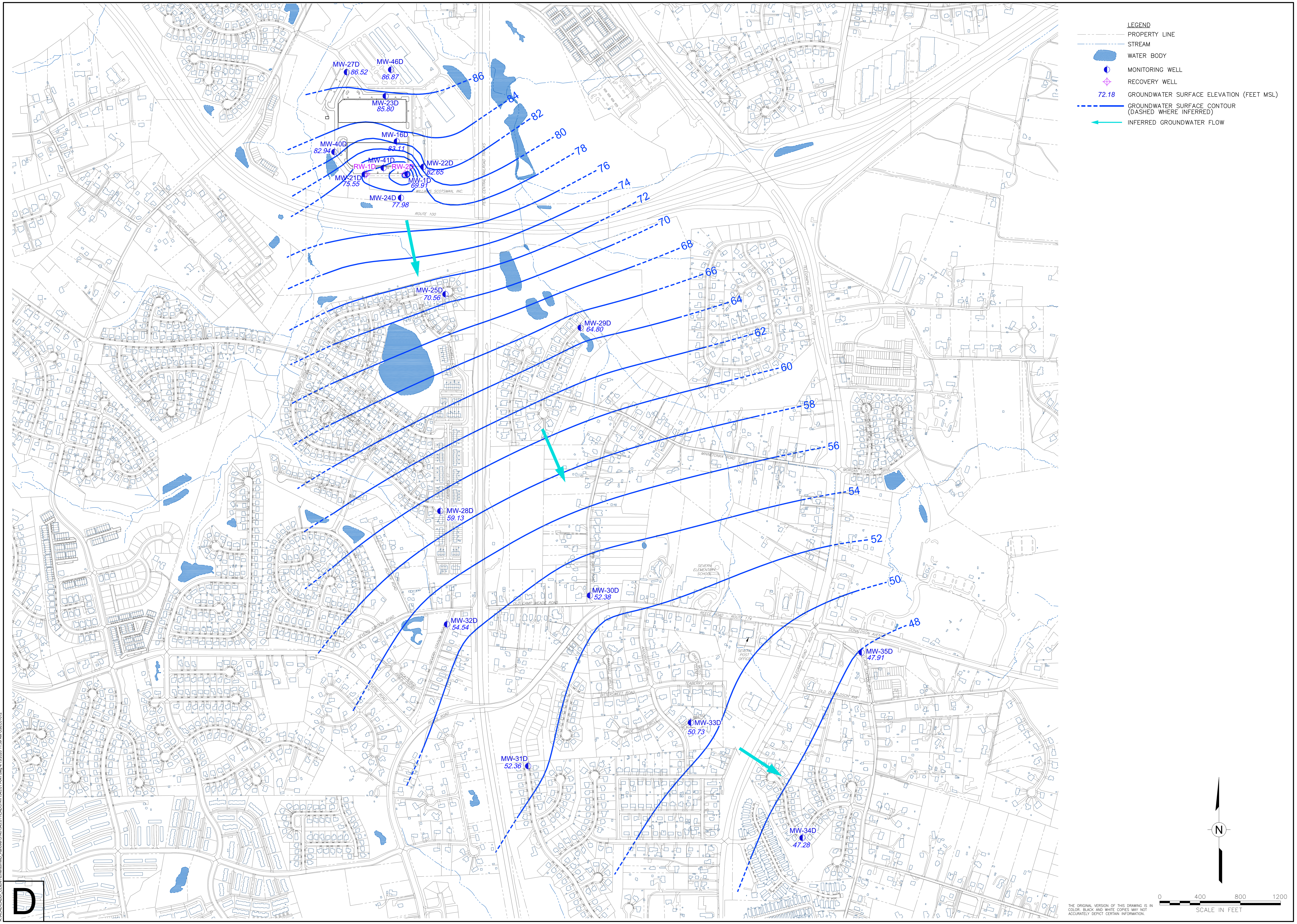

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APPROVED	RG	1/29/2020

POTENTIOMETRIC SURFACE CONTOUR MAP CONFINED PORTION OF THE LOWER PATAPSCO AQUIFER NOVEMBER 2019

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FIGURE 6

Drawing Number
314V1545.011-047

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LEGEND

- PROPERTY LINE
- WATER MAIN
- STREAM
- WATER BODY
- CONFINED LOWER PATAPSCO AQUIFER MONITORING WELL
- CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
- RESIDENTIAL WELL
- ND — NOT DETECTED
- 133 — 1,1-DCE CONCENTRATION (ppb)
- INFERRED 1,1-DCE ISO-CONCENTRATION CONTOUR (ppb)
- INFERRED 1,1-DCE ISO-CONCENTRATION CONTOUR (ppb) CHARACTERIZED BY HIGHER UNCERTAINTY GIVEN LOCATIONS OF SAMPLING POINTS
- POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)

0 800 1600
SCALE IN FEET

REFERENCE:
PARCEL INFORMATION OBTAINED FROM ANNE ARUNDEL COUNTY, DEPARTMENT OF PUBLIC WORKS http://gis-world2.aacounty.org/DPWcounter/countermap.html

Drawn By: EGC
Checked: CC 4/10/2020
Approved: RG
DWG Name: 314V1545.011-048

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND
PREPARED FOR
EMERSUB 16 LLC
ST. LOUIS, MISSOURI

Figure 7

INFERRED 1,1-DCE DISTRIBUTION IN CONFINED PORTION OF LOWER PATAPSCO AQUIFER (NOVEMBER 2019)

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B

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LEGEND

- PROPERTY LINE
- WATER MAIN
- STREAM
- WATER BODY
- CONFINED LOWER PATAPSCO AQUIFER MONITORING WELL
- CONFINED LOWER PATAPSCO AQUIFER AND PATUXENT AQUIFER MONITORING WELLS
- RESIDENTIAL WELL
- ND NOT DETECTED
- 187 1,4-DIOXANE CONCENTRATION (ppb)
- INFERRED 1,4-DIOXANE ISO-CONCENTRATION CONTOUR (ppb)
- INFERRED 1,4-DIOXANE ISO-CONCENTRATION CONTOUR (ppb) CHARACTERIZED BY HIGHER UNCERTAINTY GIVEN LOCATIONS OF SAMPLING POINTS
- POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)

0 800 1600
SCALE IN FEET

REFERENCE:
PARCEL INFORMATION OBTAINED FROM ANNE ARUNDEL COUNTY, DEPARTMENT OF PUBLIC WORKS http://gis-world2.aacounty.org/DPWcounter/countermap.html

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Checked: CC 4/10/2020
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DWG Name: 314V1545.011-049

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND
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Figure 8

INFERRED 1,4-DIOXANE DISTRIBUTION IN CONFINED PORTION OF LOWER PATAPSCO AQUIFER (NOVEMBER 2019)

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B

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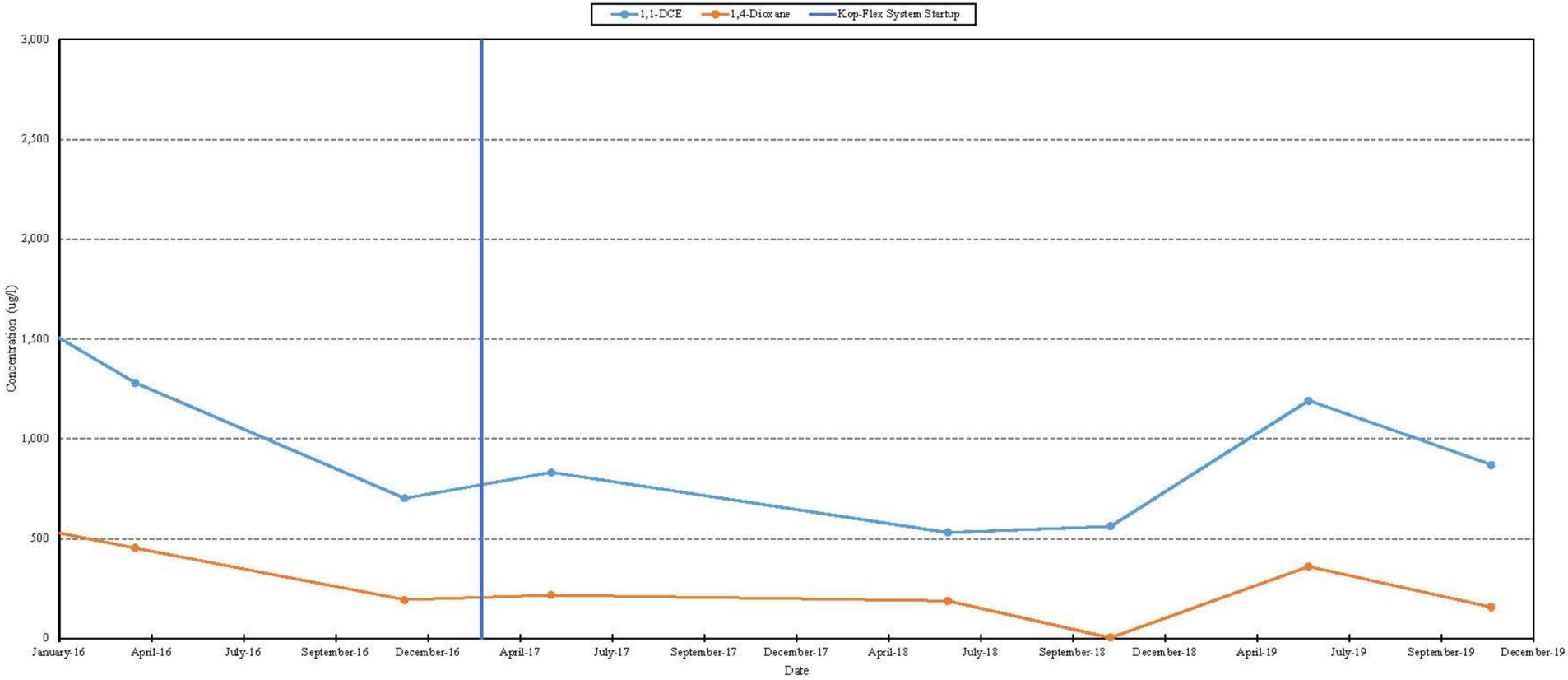

A

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Figure 9

CONCENTRATION vs. TIME PLOT
MW-24D

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND

PREPARED FOR
EMERSON
ST. LOUIS, MISSOURI

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Checked: CC 4/14/2020
Approved: RKJ
DWG Name: 314V1545.011-058

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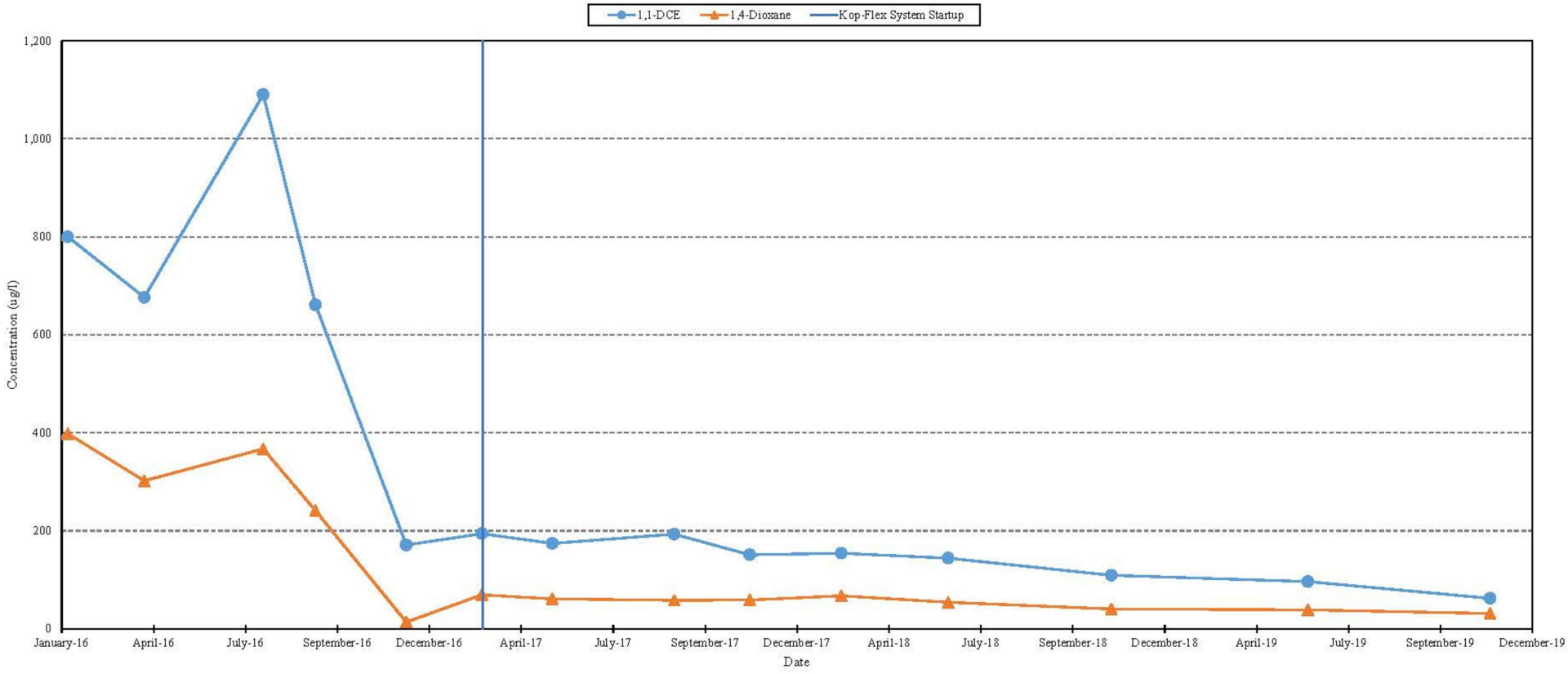

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Figure 10

CONCENTRATION vs. TIME PLOT
MW-25D-130

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND

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ST. LOUIS, MISSOURI

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Approved: RM
DWG Name: 314V1545.011-058

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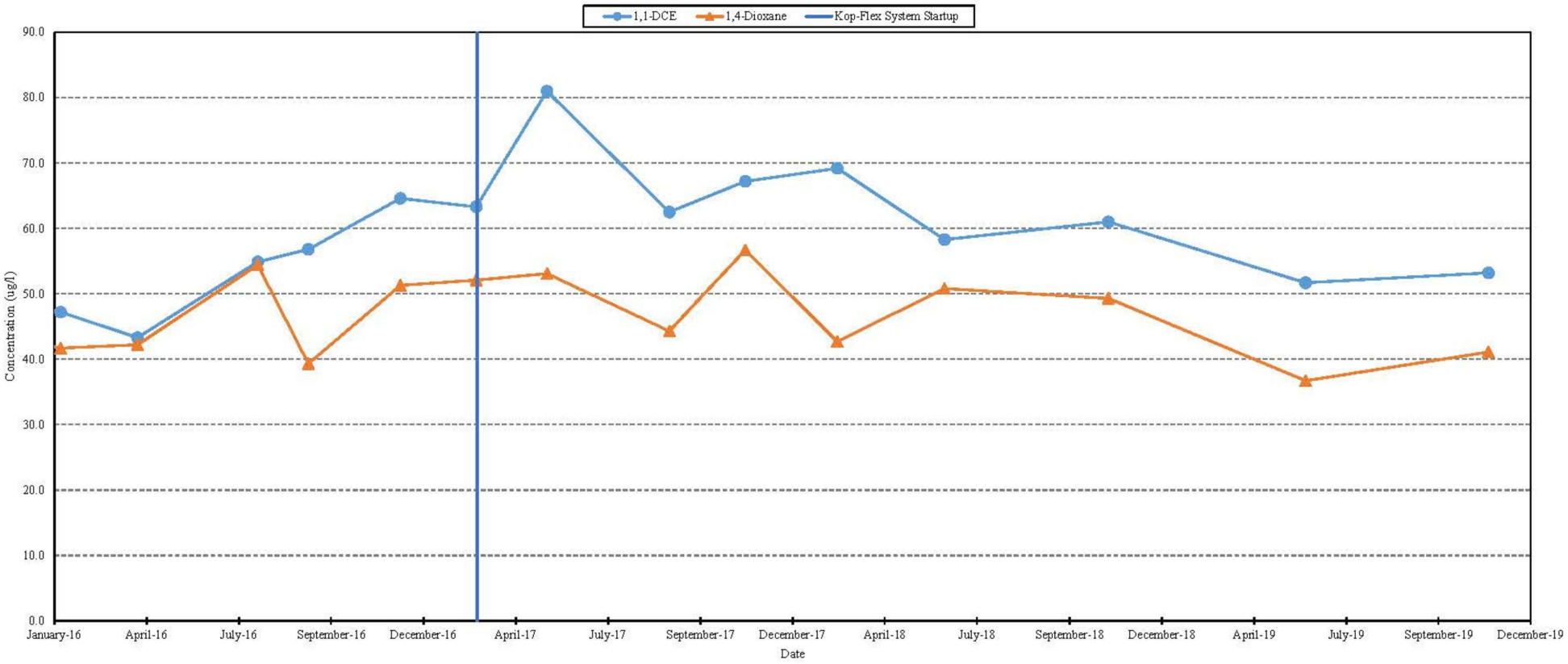

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Figure 11

CONCENTRATION vs. TIME PLOT
MW-25D-192

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND

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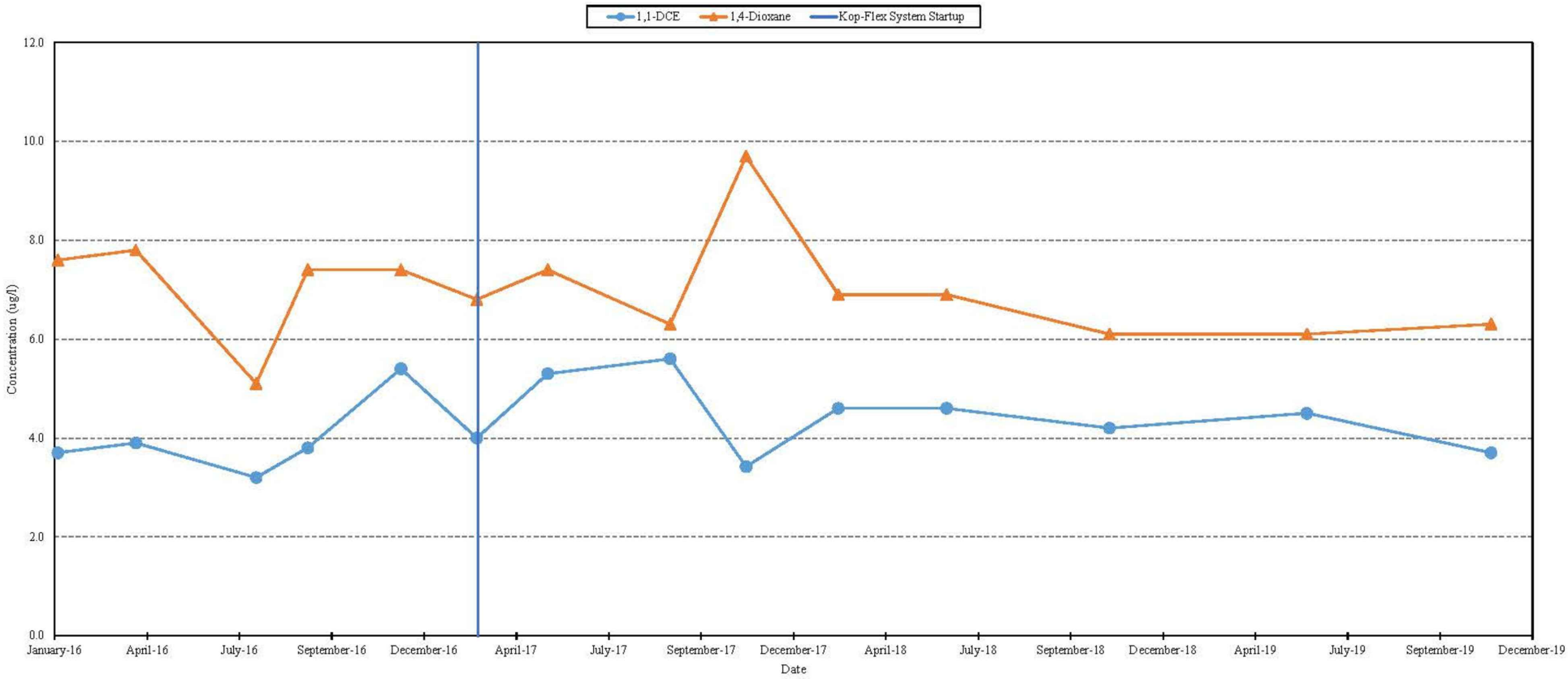

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Figure 12

CONCENTRATION vs. TIME PLOT
MW-33D-295

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND

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ST. LOUIS, MISSOURI

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DWG Name: 314V1545.011-058

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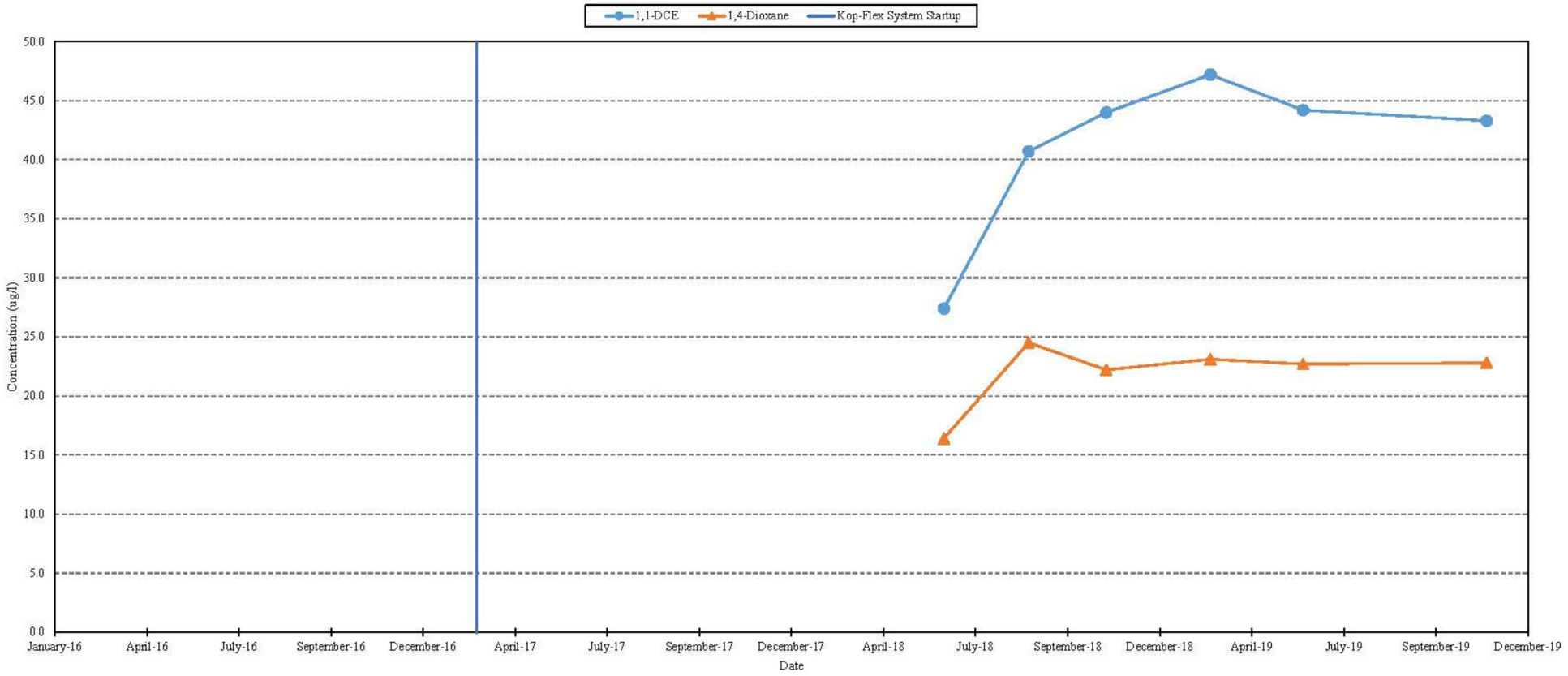

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Figure 13

CONCENTRATION vs. TIME PLOT
MW-30D-273

FORMER KOP-FLEX FACILITY
HANOVER, MARYLAND

PREPARED FOR
EMERSON
ST. LOUIS, MISSOURI

Drawn By: EGC
Checked: CC 4/14/2020
Approved: RM
DWG Name: 314V1545.011-058

TABLES

Table 1

Construction Details for Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland (a)

Well ID	Installation Date	Casing Type	Screen Type	TOC Elevation (feet AMSL)	Total Depth (feet BTOC)	Screen Length (feet)	Screen Interval Depth (ft-bgs)	Screen Interval Elevation (feet AMSL)
Shallow (Unconfined) Lower Patapsco Aquifer								
MW-25 (Abandoned August 2019)	07/30/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	130.6	40	10.0	30.0 - 40.0	100.60 - 90.60
MW-28 (Abandoned August 2019)	07/09/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	150.5	45	10.0	35.0 - 45.0	115.50 - 105.50
MW-45	03/12/17	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	126.7	38	10.0	28.0 - 38.0	98.72 - 88.72
Deep (Confined) Lower Patapsco Aquifer								
MW-24D	06/14/12	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	129.1	155	10.0	145.0 - 155.0	-15.90 - -25.90
MW-25D-130	06/27/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	130.5	130	10.0	120.0 - 130.0	10.50 - 0.50
MW-25D-192	06/25/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	130.5	192	10.0	182.0 - 192.0	-51.50 - -61.50
MW-28D	07/09/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	150.5	210	10.0	200.0 - 210.0	-49.50 - -59.50
MW-29D	03/09/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	131.9	151	10.0	141.0 - 151.0	-9.08 - -19.08
MW-30D-273	04/11/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	153.5	273	10.0	263.0 - 273.0	-109.46 - -119.46
MW-31D	08/04/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	162.5	280	10.0	270.0 - 280.0	-107.50 - -117.50
MW-32D	03/15/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	156.1	266	10.0	256.0 - 266.0	-99.86 - -109.86
MW-33D-236	07/21/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	178.6	236	10.0	226.0 - 236.0	-47.40 - -57.40
MW-33D-295	07/21/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	178.3	295	10.0	285.0 - 295.0	-106.70 - -116.70
MW-34D	04/19/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	183.9	425	10.0	415.0 - 425.0	-231.09 - -241.09
MW-35D	08/16/14	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	177.8	298	10.0	288.0 - 298.0	-110.20 - -120.20
MW-46D	04/26/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	124.77	116	10.0	106.0 - 116.0	18.77 - 8.77
Patuxent Aquifer								
MW-30D-413	04/09/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	153.1	413.00	10.0	403.0 - 413.0	-249.87 - -259.87
MW-36D	03/28/18	2.5" Sch.80 PVC	2.5" PVC, 0.020" slot size	158.7	360.00	10.0	350.0 - 360.0	-191.29 - -201.29

Notes:
a/ AMSL = above mean sea level; BTOC = below top of casing; ft-bgs = feet below ground surface.
PVC = polyvinyl chloride; Sch. = schedule

Table 2

Historical Groundwater Elevation data
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC elevation	3/17/2015		6/15/2015		9/21/2015		1/4/2016		3/21/2016		12/7/2016		5/1/2017	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	12.84	117.76	12.46	118.14	14.33	116.27	13.48	117.12	12.75	117.85	14.61	115.99	14.02	116.58
MW-28S *	Unconfined LPA	150.5	25.56	124.94	25.24	125.26	25.88	124.62	25.35	125.15	25.34	125.16	26.8	123.70	27.4	123.10
MW-45	Unconfined LPA	126.7	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	13.67	113.05
MW-24D	Confined LPA	129.1	50.9	78.20	49.29	79.81	NM	-	NM	-	44.38	84.72	46.3	82.80	48.35	80.75
MW-25-130	Confined LPA	130.5	58.7	71.80	57.59	72.91	58.26	72.24	53.95	76.55	51.01	79.49	50.27	80.23	53.80	76.70
MW-25-192	Confined LPA	130.5	59.99	70.51	56.4	74.10	57.23	73.27	53.05	77.45	50.27	80.23	52.4	78.10	53.11	77.39
MW-28D	Confined LPA	150.5	93.06	57.44	89.36	61.14	90.34	60.16	84.62	65.88	80.72	69.78	83.35	67.15	82.72	67.78
MW-29D	Confined LPA	131.9	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-273	Confined LPA	153.5	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-31D	Confined LPA	162.5	114.02	48.48	108.58	53.92	109.51	52.99	102.44	60.06	98.41	64.09	114.20	48.30	100.24	62.26
MW-32D	Confined LPA	156.1	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-33D-235	Confined LPA	178.6	131.83	46.77	125.66	52.94	127.11	51.49	119.14	59.46	115.25	63.35	114.2	64.40	117.26	61.34
MW-33D-295	Confined LPA	178.3	131.52	46.78	125.42	52.88	126.91	51.39	118.90	59.40	114.96	63.34	131.50	46.80	117.03	61.27
MW-34D	Confined LPA	183.9	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-35D	Confined LPA	177.8	132.01	45.79	126.28	51.52	127.89	49.91	118.96	58.84	114.34	63.46	131.91	45.89	117.28	60.52
MW-46D	Confined LPA	124.8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-413	Patuxent	153.1	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-36D	Patuxent	158.7	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-

Notes:
LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Wells abandoned in August 2019

Table 2

Historical Groundwater Elevation data
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC elevation	8/31/2017		11/14/2017		2/13/2018		5/31/2018		8/23/2018		11/8/2018		2/19/2019	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	14.09	116.51	14.6	116.00	14.56	116.04	13.10	117.50	NM	-	11.84	118.76	11.75	118.85
MW-28S *	Unconfined LPA	150.5	27.2	123.30	27.22	123.28	27.48	123.02	27.42	123.08	NM	-	24.33	126.17	23.30	127.20
MW-45	Unconfined LPA	126.7	NM	-	NM	-	NM	-	12.98	113.74	NM	-	NM	-	11.98	114.74
MW-24D	Confined LPA	129.1	48.35	80.75	51.99	77.11	NM		50.94	78.16	NM	-	NM	-	48.92	80.18
MW-25-130	Confined LPA	130.5	61.38	69.12	58.46	72.04	58.31	72.19	58.23	72.27	59.53	70.97	58.75	71.75	54.96	75.54
MW-25-192	Confined LPA	130.5	60.36	70.14	58.71	71.79	57.49	73.01	57.40	73.10	58.69	71.81	57.63	72.87	54.20	76.30
MW-28D	Confined LPA	150.5	94.55	55.95	89.03	61.47	67.37	83.13	88.75	61.75	90.98	59.52	88.30	62.20	84.78	65.72
MW-29D	Confined LPA	131.9	NM	-	NM	-	NM	-	64.94	66.98	66.56	65.36	65.03	66.89	60.64	71.28
MW-30D-273	Confined LPA	153.5	NM	-	NM	-	NM	-	98.66	54.88	100.70	52.84	98.14	55.40	93.10	60.44
MW-31D	Confined LPA	162.5	115.67	46.83	107.21	55.29	106.29	56.21	106.80	55.70	109.95	52.55	106.27	56.23	102.47	60.03
MW-32D	Confined LPA	156.1	NM	-	NM	-	NM	-	97.90	58.24	100.65	55.49	98.97	57.17	93.79	62.35
MW-33D-235	Confined LPA	178.6	133.39	45.21	124.55	54.05	123.79	54.81	124.00	54.60	127.52	51.08	125.14	53.46	119.35	59.25
MW-33D-295	Confined LPA	178.3	133.14	45.16	124.36	53.94	123.60	54.70	123.83	54.47	127.34	50.96	125.69	52.61	119.10	59.20
MW-34D	Confined LPA	183.9	NM	-	NM	-	NM	-	132.70	51.21	136.42	47.49	131.76	52.15	127.40	56.51
MW-35D	Confined LPA	177.8	133.55	44.25	125.59	52.21	124.02	53.78	124.27	53.53	128.19	49.61	123.64	54.16	119.18	58.62
MW-46D	Confined LPA	124.8	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-30D-413	Patuxent	153.1	NM	-	NM	-	NM	-	138.10	15.03	143.75	9.38	140.62	12.51	130.73	22.40
MW-36D	Patuxent	158.7	NM	-	NM	-	NM	-	141.75	16.96	146.32	12.39	143.85	14.86	134.83	23.88

Notes:
LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Wells abandoned in August 2019

Table 2

Historical Groundwater Elevation data
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Aquifer/Zone	TOC elevation	5/22/2019		8/6/2019		11/20/2019	
			Depth to Water	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*	*Depth to Water*	*Groundwater Elevation*
MW-25S *	Unconfined LPA	130.6	NM	-	NM	-	NM	-
MW-28S *	Unconfined LPA	150.5	NM	-	NM	-	NM	-
MW-45	Unconfined LPA	126.7	11.75	114.97	NM	-	14.55	112.17
MW-24D	Confined LPA	129.1	49.67	79.43	52.37	76.73	51.12	77.98
MW-25-130	Confined LPA	130.5	56.23	74.27	60.79	69.71	59.94	70.56
MW-25-192	Confined LPA	130.5	55.45	75.05	60.37	70.13	59.02	71.48
MW-28D	Confined LPA	150.5	86.96	63.54	94.24	56.26	91.37	59.13
MW-29D	Confined LPA	131.9	62.36	69.56	67.20	64.72	67.10	64.82
MW-30D-273	Confined LPA	153.5	95.74	57.80	104.75	48.79	101.12	52.42
MW-31D	Confined LPA	162.5	104.91	57.59	113.35	49.15	110.14	52.36
MW-32D	Confined LPA	156.1	97.02	59.12	99.43	56.71	101.56	54.58
MW-33D-235	Confined LPA	178.6	121.72	56.88	132.76	45.84	127.87	50.73
MW-33D-295	Confined LPA	178.3	NM	NA	131.14	47.16	127.65	50.65
MW-34D	Confined LPA	183.9	129.93	53.98	141.48	42.43	136.62	47.29
MW-35D	Confined LPA	177.8	121.65	56.15	127.51	50.29	129.89	47.91
MW-46D	Confined LPA	124.8	35.47	89.30	38.40	86.37	37.90	86.87
MW-30D-413	Patuxent	153.1	137.25	15.88	145.27	7.86	143.64	9.49
MW-36D	Patuxent	158.7	141.30	17.41	147.65	11.06	146.75	11.96

Notes:
LPA = Lower Patapsco Aquifer
NM = Not Measured
TOC = Top of Casing
* Wells abandoned in August 2019

Table 3

Hydrasleeve Depth Intervals
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland

Well ID	Well Construction		Hydrasleeve Placement	
	Well Diameter	Screened Interval (ft-bgs)	HS Size	HS Interval Placement (ft-bgs)
Shallow (Unconfined) Lower Patapsco Aquifer				
MW-25(Abandoned August 2019)	2	30 - 40	600 mL	34 - 36.5
MW-28(Abandoned August 2019)	2	35 - 45	600 mL	39 - 41.5
MW-45	2	28 - 38	600 mL	32 - 34.5
Deep (Confined) Lower Patapsco Aquifer				
MW-24D	2	118 - 128	600 mL	122 - 124.5
MW-25D-130	2	120 - 130	600 mL	125 - 127.5
MW-25D-192	2	182 - 192	600 mL	185 - 187.5
MW-28D	2	200 - 210	600 mL	205 - 207.5
MW-29D	2	141 - 151	600 mL	146 - 148.5
MW-30D-273	2	263 - 273	600 mL	267 - 269.5
MW-31D	2	270 - 280	600 mL	275 - 277.5
MW-32D	2	226 - 236	600 mL	233 - 235.5
MW-33D-236	2	226 - 236	600 mL	230 - 232.5
MW-33D-295	2	285 - 295	600 mL	290 - 292.5
MW-34D	2	375 - 385	600 mL	379 - 381.5
MW-35D	2	288 - 298	600 mL	293 - 295.5
MW-46D	2	80 - 90	600 mL	84 - 86.5
Patuxent Aquifer				
MW-30D-413	2	403 - 413	600 mL	407 - 409.5
MW-36D	2	350 - 360	600 mL	357 - 359.5

ft-bgs = feet below ground surface
HS = hydrasleeve
mL = milliliters.

Table 4

2019 Field Parameter Measurements
Offsite Monitoring Wells
Former Kop-Flex Facility Site
Hanover, Maryland (a)

Well ID	Sample Date	Temperature (ºC)	pH (SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)
Unconfined Lower Patapsco Aquifer Wells					
MW-45	5/22/2019	20.42	4.63	0.480	614
Confined Lower Patapsco Aquifer Wells					
MW-24D	5/22/2019	20.72	5.63	0.120	56.1
	11/19/2019	15.29	4.79	0.388	63.1
MW-25D-130	5/22/2019	23.22	7.36	0.028	16.2
	11/19/2019	12.71	4.45	0.172	>1,000
MW-25D-192	5/22/2019	21.16	7.26	0.054	11.5
	11/19/2019	12.54	3.27	0.188	87.2
MW-28D	5/22/2019	20.93	8.12	0.040	32.8
	11/20/2019	10.67	5.56	0.156	8.8
MW-29D	2/19/2019	9.21	7.44	0.168	884
	5/22/2019	22.82	8.24	0.193	488
	11/20/2019	9.58	4.33	0.424	>1000
MW-30D-273	2/19/2019	8.73	6.24	0.124	>1,000
	5/22/2019	24.35	6.03	0.027	659
	11/20/2019	8.89	3.82	0.040	58.4
MW-31D	5/22/2019	22.52	7.08	0.169	>1000
	11/20/2019	11.46	4.78	0.114	324
MW-32D	2/19/2019	11.25	5.21	3.430	NM
	5/22/2019	23.15	8.81	3.16	0.00
	11/20/2019	10.11	4.00	0.616	37.1
MW-33D-235	5/22/2019	23.63	6.81	0.032	18.9
	11/20/2019	11.95	4.11	0.032	4.1
MW-33D-295	5/22/2019	23.80	6.98	0.029	9.1
	11/20/2019	12.65	4.74	0.161	5.5
MW-34D	2/19/2019	8.57	8.16	0.113	>1,000
	5/22/2019	23.99	7.16	0.168	34.7
	11/20/2019	11.28	4.98	0.375	41
MW-35D	5/22/2019	23.87	6.82	0.087	64.9
	11/20/2019	9.34	4.04	0.201	16.9
MW-46D	5/21/2019	24.22	5.11	0.180	173
	11/19/2019	15.39	3.77	0.707	319
Patuxent Aquifer Wells					
MW-36D	2/19/2019	7.77	6.18	0.032	>1,000
	5/22/2019	22.77	6.53	0.125	27.8
	11/22/2019	NM	NM	NM	NM
MW-30D-413	2/19/2019	8.91	6.65	0.073	>1,000
	5/22/2019	23.86	6.48	0.590	498
	11/20/2019	8.84	3.83	0.102	>1,000

a/ ºC = degrees Celsius; SU = standard units; mS/cm = milli siemens per centimeter;
NTU = Nephelometric Turbidity Unit; NR = not recorded;
NM = Not measured due to insufficient water in HydraSleeve to collect readings.

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland (a)

Well ID	Sample Date	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
Groundwater Quality Standard (µg/L)		2.8 (c/)	5	7	70	4.6	5	200	5	5
Unconfined Lower Patapsco Aquifer Wells										
MW-25 (b)	3/19/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/24/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/23/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/23/2016	1.0 U	1.0 U	1.5	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/20/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	**11.7**	1.0 U	1.0 U	1.0 U
	2/13/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
MW-28 (b)	3/17/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/22/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/5/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/22/2016	1.0 U	1.0 U	6.2	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
MW-45	3/24/2017	1.0 U	1.0 U	1.9	1.0 U	2.3	2.0 U	1.0 U	1.0 U	1.0 U
	6/28/2018	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
Confined Lower Patapsco Aquifer Wells										
MW-24D	6/1/2012	ND	ND	**1,300**	5.0 U	**342**	10.0 U	53	5.0 U	5.0 U
	8/27/2012	72	**13**	**1,600**	6	2.0 U	10.0 U	60	1.5	**13**
	12/14/2012	61	**12**	**1,500**	6.7	**393**	10.0 U	62	1.5	**16**
	7/18/2013	57.7	**10.8**	**1,520**	6.2	**470**	10.0 U	48.7	1.3	**12.4**
	12/13/2013	47.4	ND	**1,190**	5.0 U	**433**	10.0 U	34.1	5.0 U	**10.1**
	6/14/2014	57.3	**11.3**	**1,510**	5.0 U	**488**	10.0 U	43.4	5.0 U	**14.2**
	12/5/2014	**106**	ND	**2,640**	5.0 U	**657**	10.0 U	60.9	5.0 U	5.0 U
	6/15/2015	**92.5**	ND	**2,100**	5.0 U	**728**	10.0 U	53.3	5.0 U	5.0 U
	3/16/2016	68.2	ND	**1,280**	5.0 U	**452**	10.0 U	54.3	5.0 U	5.0 U
	12/8/2016	36.1	**5.2**	**701**	5.0 U	**192**	10.0 U	9.0	5.0 U	5.0 U
	5/2/2017	40.4	**5.6**	**830**	5.0 U	**216**	10.0 U	10.2	5.0 U	5.0 U
	5/30/2018	26.6	4.0 U	**529**	4.0 U	**187**	8.0 U	5.5	4.0 U	4.0 U
	11/7/2018	**29.8**	5.0 U	**560**	5.0 U	2.0 U	10.0 U	5.0 U	5.0 U	5.0 U
	5/22/2019	**66.2**	10.0 U	**1,190**	10.0 U	**359**	50.0 U	18	10.0 U	10.0 U
	11/19/2019	**54.5**	**6.6**	**868**	5.0 U	**155**	25.0 U	10	5.0 U	6.0 U
MW-25D-130	3/19/2015	38.6	**10.8**	**854**	10.0 U	**446**	200 U	**8,930**	100 U	100 U
	6/24/2015	37.1	**8.9**	**1,030**	4.6	**303**	2.0 U	46.3	1.2	**6.8**
	9/23/2015	29.7	10.0 U	**697**	10.0 U	**295**	20.0 U	32.3	10.0 U	**14.2**
	1/7/2016	33.4	**9.7**	**800**	5.0 U	**398**	10.0 U	5.0 U	5.0 U	**6.1**
	3/23/2016	24.5	**8.0**	**676**	5.0 U	**302**	10.0 U	26.2	5.0 U	**5.0**
	7/19/2016	39.3	**10.2**	**1,090**	4.9 J	**367**	14.3 J	37.0	10.0 U	**6.5** J
	9/9/2016	27.9	**6.4**	**661**	5.0 U	**241**	**12.0**	25.0	5.0 U	5.0 U
	12/8/2016	6.7	1.5	**171**	1.0 U	**13.6**	2.0 U	6.9	1.0 U	1.0 U
	2/21/2017	7.2	1.7	**194**	1.0 U	**69.1**	2.0 U	7.0	1.0 U	1.2
	5/2/2017	6.5	2.0 U	**174**	2.0 U	**61.0**	4.0 U	5.0	2.0 U	2.0 U
	8/31/2017	7.4	1.7	**193**	2.0 U	**57.9**	4.0 U	6.9	2.0 U	2.0 U
	11/14/2017	5.1	1.3	**151**	0.57 J	**58.5**	5.0 U	6.4	1.0 U	1.1
	2/13/2018	6.3	2.0 U	**154**	2.0 U	**67.1**	5.0 U	6.4	1.0 U	1.0 U
	5/30/2018	5.0	1.4	**144**	2.0 U	**53.9**	5.0 U	5.3	1.0 U	1.0 U
	11/8/2018	**4.4**	1.1	**109**	2.0 U	**40.2**	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	**3.7**	1.0 U	**96.2**	1.0 U	**38.4**	5.0 U	4.2	1.0 U	1.0 U
	11/19/2019	2.7	1.0 U	**62.1**	1.0 U	**31.0**	5.0 U	1.0 U	1.0 U	1.0 U
MW-25D-192	3/19/2015	11.7	1.0 U	**53.0**	1.0 U	**49.4**	2.0 U	13.7	1.0 U	1.0 U
	6/25/2015	11.9	1.0 U	**59.4**	1.0 U	**39.8**	2.0 U	14.2	1.0 U	1.0 U
	9/22/2015	13.9	1.0 U	**51.4**	1.0 U	**45.0**	2.0 U	12.9	1.0 U	1.3
	1/7/2016	11.7	1.0 U	**47.2**	1.0 U	**41.7**	2.0 U	12.5	1.0 U	1.0 U
	3/23/2016	10.3	1.0 U	**43.3**	1.0 U	**42.2**	2.0 U	11.3	1.0 U	1.0 U
	7/20/2016	11.7	0.73 J	**54.9**	1.0 U	**54.4**	2.0 U	11.1	1.0 U	1.0 U
	9/8/2016	12.9	1.0 U	**56.8**	1.0 U	**39.3**	2.0 U	12.6	1.0 U	1.0 U
	12/8/2016	16.1	1.0 U	**64.6**	1.0 U	**51.3**	2.0 U	13.3	1.0 U	1.0 U
	2/21/2017	14.0	1.0 U	**63.3**	1.0 U	**52.1**	2.0 U	11.6	1.0 U	1.0 U
	5/2/2017	16.9	1.0 U	**81.0**	1.0 U	**53.1**	2.0 U	13.5	1.0 U	1.0 U
	8/31/2017	15.7	1.0 U	**62.5**	1.0 U	**44.3**	2.0 U	13.1	1.0 U	1.0 U
	11/14/2017	13.6	0.67 J	**67.2**	1.0 U	**56.7**	5.0 U	13.6	1.0 U	1.0 U
	2/13/2018	13.7	1.0 U	**69.2**	1.0 U	**42.7**	5.0 U	11.0	1.0 U	1.0 U
	5/30/2018	10.8	1.0 U	**58.3**	1.0 U	**50.8**	5.0 U	7.2	1.0 U	1.0 U
	11/8/2018	**13.7**	1.0 U	**61.0**	1.0 U	**49.3**	5.0 U	9.8	1.0 U	1.0 U
	5/22/2019	**11.8**	1.0 U	**51.7**	1.0 U	**36.7**	5.0 U	8.5	1.0 U	1.0 U
	11/19/2019	**12.6**	1.0 U	**53.2**	1.0 U	**41.1**	5.0 U	1.0 U	1.0 U	1.0 U

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland (a)

Well ID	Sample Date	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
Groundwater Quality Standard (µg/L)		2.8 (c/)	5	7	70	4.6	5	200	5	5
Confined Lower Patapsco Aquifer Wells										
MW-28D	3/17/2015	1.0 U	1.0 U	**10.6**	1.0 U	**5.0**	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	**12.8**	1.0 U	4.5	2.0 U	1.0 U	1.0 U	1.0 U
	9/22/2015	1.0 U	1.0 U	**14.3**	1.0 U	4.4	2.0 U	1.0 U	1.0 U	1.0 U
	1/5/2016	1.0 U	1.0 U	**11.5**	1.0 U	**5.5**	2.0 U	1.0 U	1.0 U	1.0 U
	3/23/2016	1.0 U	1.0 U	**9.1**	1.0 U	4.0	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	1.0 U	0.25 J	**10.1**	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	**12.0**	1.0 U	**5.0**	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	6.3	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	4.6	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	5.8	1.0 U	2.7	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	5.0	1.0 U	2.7	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	1.0 U	1.0 U	5.5	1.0 U	3.5	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	1.0 U	1.0 U	4.3	1.0 U	2.8	5.0 U	1.0 U	1.0 U	1.0 U
	5/30/2018	1.0 U	1.0 U	6.1	1.0 U	2.4	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	6.9	1.0 U	2.3	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	5.2	1.0 U	3.5	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	6.1	1.0 U	3.9	5.0 U	1.0 U	1.0 U	1.0 U
MW-29D	5/21/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
MW-30D-273	5/31/2018	1.0 U	1.0 U	**27.4**	1.0 U	**16.4**	5.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0	1.0 U	**40.7**	1.0 U	**24.5**	5.0 U	1.7	1.0 U	1.0 U
	11/8/2018	1.2	1.0 U	**44.0**	1.0 U	**22.2**	5.0 U	2.1	1.0 U	1.0 U
	2/19/2019	1.1	1.0 U	**47.2**	1.0 U	**23.1**	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.1	1.0 U	**44.2**	1.0 U	**22.7**	5.0 U	2.0	1.0 U	1.0 U
	11/20/2019	1.1	1.0 U	**43.3**	1.0 U	**22.8**	5.0 U	1.0 U	1.0 U	1.0 U
MW-31D	3/17/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/24/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/22/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/21/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
MW-32D	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
MW-33D-235	3/18/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/21/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/4/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	3/21/2016	1.0 U	1.0 U	1.0 U	1.0 U	3.0	2.0 U	1.0 U	1.0 U	1.0 U
	7/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	1.0 U	1.0 U	1.0 U	1.0 U	4.3	**12.0**	1.0 U	1.0 U	1.0 U
	2/13/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U

Table 5

Historical Offsite Groundwater Sampling Results (2015 to Present)
Former Kop-Flex Facility Site
Hanover, Maryland (a)

Well ID	Sample Date	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
Groundwater Quality Standard (µg/L)		2.8 (c/)	5	7	70	4.6	5	200	5	5
MW-33D-295	3/18/2015	1.0 U	1.0 U	4.6	1.0 U	**8.0**	2.0 U	1.0 U	1.0 U	1.0 U
	6/23/2015	1.0 U	1.0 U	3.3	1.0 U	**6.8**	2.0 U	1.0 U	1.0 U	1.0 U
	9/21/2015	1.0 U	1.0 U	4.8	1.0 U	**6.8**	2.0 U	1.0 U	1.0 U	1.0 U
	1/4/2016	1.0 U	1.0 U	3.7	1.0 U	**7.6**	2.0 U	1.0 U	1.0 U	1.0 U
	3/21/2016	1.0 U	1.0 U	3.9	1.0 U	**7.8**	2.0 U	1.0 U	1.0 U	1.0 U
	7/18/2016	1.0 U	0.36 J	3.2	1.0 U	**5.1**	2.0 U	1.0 U	1.0 U	1.0 U
	9/7/2016	1.0 U	1.0 U	3.8	1.0 U	**7.4**	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	5.4	1.0 U	**7.4**	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	4.0	1.0 U	**6.8**	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	5.3	1.0 U	**7.4**	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	5.6	1.0 U	**6.3**	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	1.0 U	1.0 U	3.4	1.0 U	**9.7**	**11.5**	0.49 J	1.0 U	1.0 U
	2/13/2018	1.0 U	1.0 U	4.6	1.0 U	**6.9**	2.0 U	0.49 J	1.0 U	1.0 U
	5/31/2018	1.0 U	1.0 U	4.6	1.0 U	**6.9**	2.0 U	0.49 J	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	4.2	1.0 U	**6.1**	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	4.5	1.0 U	**6.1**	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	3.7	1.0 U	**6.3**	5.0 U	1.0 U	1.0 U	1.0 U
MW-34D	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
MW-35D	3/18/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	6/22/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/21/2015	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	1/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	4/15/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	7/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	9/6/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	12/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/21/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/2/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/31/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/14/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	2/14/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
MW-46D	5/30/2018	13.7	1.0 U	**29.4**	1.0 U	**73.5**	2.0 U	1.2	1.0 U	1.0 U
	11/7/2018	**22.1**	1.2	**99.6**	1.0 U	**96.7**	2.0 U	7.7	1.0 U	1.0 U
	5/21/2019	**26.1**	1.0	**125**	1.0 U	**88.0**	5.0 U	10.2	1.0 U	1.0 U
	11/19/2019	**23.4**	1.4	**114**	1.0	**96.3**	5.0 U	1.0 U	1.0 U	1.0 U
Patuxent Aquifer Wells										
MW-36D	5/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
MW-30D-413	5/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	8/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	11/8/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	2/19/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U
	5/22/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U
	11/20/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	1.0 U	1.0 U

a/ All sample concentrations are in micrograms per liter (µg/l).
b/ Well abandoned August 2019
c/ MDE GW Quality Standard changed from 90 µg/l to 2.8 µg/l in October 2018
DCA = dichloroethane; DCE = dichloroethene; TCA = trichloroethane; TCE = trichlorothene
U = not detected above the method detection limit; J = estimated concentration between the reporting limit and method detection limit.
Bolded values indicate an exceedence of the Groundwater Quality Standards

Table 6

Offsite Groundwater Natural Attenuation Evaluation
August 2019 Sampling Results
Former Kop-Flex Facility
Hanover, Maryland

	Sample Name:	MW-24D	MW-25D-130	MW-25D-192 (c)	MW-100 (c)	MW-30D-273	MW-33D-295
	Date:	8/7/2019	8/8/2019	8/8/2019	8/8/2019	8/7/2019	8/8/2019
	Groundwater Cleanup Standards (µg/L)						
Parameter Collected by HydraSleeve ™							
Volatile Organic Compounds (µg/l)							
1,1,1-Trichloroethane	200	5.0 U	1.0 U	1.0 U	5.9	1.0 U	1.0 U
1,1-Dichloroethane	2.8	**49.5**	**3.8**	**9.6**	**10.1**	1.1	1.0 U
1,1-Dichloroethene	7	**832**	**112**	**34.5**	**44.3**	**49.6**	4.5
1,2-Dichloroethane	5	**6.0**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane (p-Dioxane)	4.6	**220**	**39.6**	**30.6**	**34.8**	**20.5**	**6.0**
Methyl-tert-butyl ether	20	5.0 U	1.0 U	1.7	1.0 U	1.0 U	1.0 U
Parameters Collected by Low Flow							
Dissolved Gases (µg/l)							
Ethane	NS	10.0 U	10.0 U	10.0 U	NA	10.0 U	10.0 U
Ethene	NS	10.0 U	10.0 U	10.0 U	NA	10.0 U	10.0 U
Methane	NS	10.0 U	10.0 U	10.0 U	NA	10.0 U	10.0 U
General Chemistry (mg/l)							
Alkalinity, Total as CaCO3	NS	8.8	5.0 U	5.0 U	NA	5.0 U	5.0 U
Chloride	NS	14.2	8.4	9.6	NA	1.7	1.3
Sulfate	NS	1.1	1.0 U	1.0 U	NA	1.3	1.0 U
Sulfide	NS	0.10 U	0.10 U	0.10 U	NA	0.10 U	0.10 U
Functional Genes (cells/ml)							
Propane Monooxygenase (PPO)	NS	6.00E-01 J	7.20E+00	1.20E+00 J	NA	2.00E-01 J	1.52E+02
Soluble Methane Monooxygenase (SMMO)	NS	4.70E+00 U	4.60E+00 U	4.60E+00 U	NA	4.90E+00 U	4.80E+00 U
Toluene Monooxygenase 2 (RDEG)	NS	1.77E+01	1.20E+02	3.94E+01	NA	7.62E+01	2.37E+03
Toluene Monooxygenase (RMO)	NS	4.70E+00 U	4.60E+00 U	4.60E+00 U	NA	4.90E+00 U	4.80E+00 U

Table 6

Offsite Groundwater Natural Attenuation Evaluation
August 2019 Sampling Results
Former Kop-Flex Facility
Hanover, Maryland

Sample Name:		MW-24D	MW-25D-130	MW-25D-192 (c)	MW-100 (c)	MW-30D-273	MW-33D-295
Date:		8/7/2019	8/8/2019	8/8/2019	8/8/2019	8/7/2019	8/8/2019
	Groundwater Cleanup Standards (µg/L)						
^{14}C- 1,4-Dioxane Cometabolism							
Rate Constant, k (year^{-1})							
Groundwater (GW) Rate	NS	9.87E-03	4.63E-04	7.39E-03	NA	8.07E-03	8.57E-03
GW Rate, 95% Confidence Interval (CI)	NS	2.26E-03	7.71E-04	2.40E-03	NA	4.37E-03	5.46E-03
Filter-Sterilized Groundwater (FSGW) Rate	NS	7.66E-03	5.48E-03	7.73E-03	NA	7.50E-03	1.19E-02
FSGW 95% CI Rate	NS	3.44E-03	2.74E-04	3.64E-03	NA	3.60E-03	7.05E-03
Net Rate	NS	2.21E-03	0	0	NA	5.75E-04	0
Net Rate, 95% CI	NS	3.99E-03	-	-	NA	5.49E-03	-
Half Life (year)							
Net Half Life	NS	-	-	-	-	-	-
Net Lower Half Life	NS	-	-	-	-	-	-
Net Upper Half Life	NS	-	-	-	-	-	-
Field Parameters/Field Analysis							
Temperature (ºC)	NS	16.02	20.20	16.74	NA	17.28	23.67
pH (standard units)	NS	5.44	4.70	4.42	NA	4.58	4.18
ORP (mV)	NS	372	505	498	NA	480	511
Conductivity (mS/cm)	NS	0.053	0.027	0.036	NA	0.013	0.011
Turbidity (NTU)	NS	8.8	28.8	0.0	NA	7.5	23.6
Dissolved Oxygen (mg/l)	NS	5.15	2.98	3.10	NA	5.46	4.24
Iron, Ferrous (mg/l)	NS	0.36	0.04	0.03	NA	1.48	0.44
Iron, Total, FerroVer® (mg/l)	14	0.53	0.06	0.03	NA	2.43	1.18

Notes:
a/ µg/l = micrograms per liter; mg/l = milligrams per liter; cells/ml = cells per milliliter; U = compound not detected above method detection limit; J = estimated concentration; NA = not analyzed; NS = no standard; ºC = degrees Celsius; ORP = oxidation reduction potential; mV = millivolts; mS/cm = milliseimens per centimeter; NTU = Nephelometric Turbidity Unit; MDE = Maryland Department of the Environment; VOCs = Volatile organic compounds. VOCs shown were detected at one or more location.
Compounds in **bold** exceed the MDE Cleanup Standards for Groundwater, Type I and II Aquifers, where promulgated. For 1,4-Dioxane, a calculated risk-based groundwater criterion for 1,4-dioxane of 4.6 µg/l is applied as per MDE with respect to the plume emanating from the former Kop-Flex facility property.
b/ VOCs collected using no-purge HydraSleeve™ Sampler. All other parameters collected using low flow purge.
c/ Sample and duplicate.

APPENDIX

A MONITORING WELL ABANDONMENT FORMS

A-ZONE
ENVIRONMENTAL SERVICES

August 23, 2019

Brian Chew
Supervisor, Well Construction and Groundwater Quality Program
Anne Arundel County Health Department
3 Harry S. Truman Pkwy.
Annapolis, MD 21401

Re: Well Abandonment Reports

Dear Mr. Chew:

Enclosed please find 2 completed Water Well Abandonment-Sealing Report Forms and two well tags for a site on Fairbanks Drive.

If you have any questions or need any additional information, please do not hesitate to contact me at 304-724-6458 or csealander@a-zoneenvironmental.com.

Sincerely,

Christina J. Sealander

Christina J. Sealander
Office Manager

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

WATER WELL ABANDONMENT-SEALING REPORT FORM

MW-28B

SUBMIT COPIES OF COMPLETED FORM TO:
* COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 8-6-19 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) AA-13-0685

* PERMIT NUMBER OF REPLACEMENT WELL: ____

* PERSON ABANDONING WELL: Jesse Morgan WELL DRILLER'S LICENSE NUMBER: 106
CIRCLE: MWD / MSD / MGD

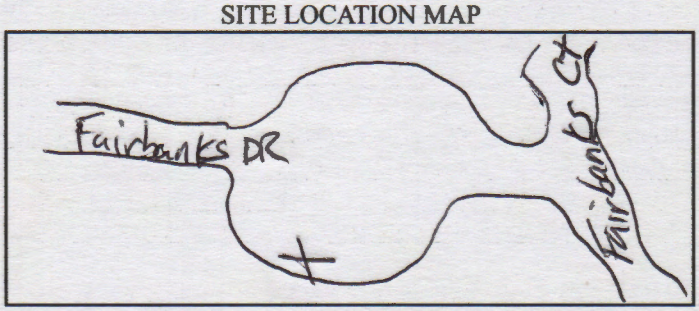
* OWNER'S NAME: Anne Arundel Co

* WELL LOCATION:
COUNTY: Anne Arundel Co
NEAREST TOWN: Hanover
TAX MAP ____ BLOCK ____ PARCEL ____
SUBDIVISION: ____
SECTION: ____ LOT: ____
STREET ADDRESS: Fairbanks DR

LATITUDE 39.139851

LONGITUDE 76.698855

SITE LOCATION MAP



LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Portland Cement	45	0
VOLUME OF MATERIAL USED		
11 Gal		

* TYPE OF WELL BEING ABANDONED:
✓ DRILLED ____ JETTED
____ BORED ____ HAND DUG
____ OTHER (specify) ____

* USE CODE:
____ DOMESTIC ____ MUNICIPAL/PUBLIC
____ IRRIGATION ____ INDUSTRIAL
✓ TEST/OBSERVATION ____ GEOTHERMAL

* TYPE OF CASING:
____ STEEL ✓ PLASTIC
____ CONCRETE ____ OTHER (specify)
____

SIZE OF CASING: 2.5 INCHES IN DIAMETER

DEPTH OF WELL: 45 FEET DEEP

WAS ANY CASING REMOVED? ✓ YES ____ NO
If yes, length removed, in feet: 45

WAS CASING RIPPED OR PERFORATED? N/A YES X NO

Pursuant to § 10-624 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law.

[signature] MGD106 (MWD) / MSD / MGS 8/23/19
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE# CIRCLE ONE DATE

ORIGINAL

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

WATER WELL ABANDONMENT-SEALING REPORT FORM

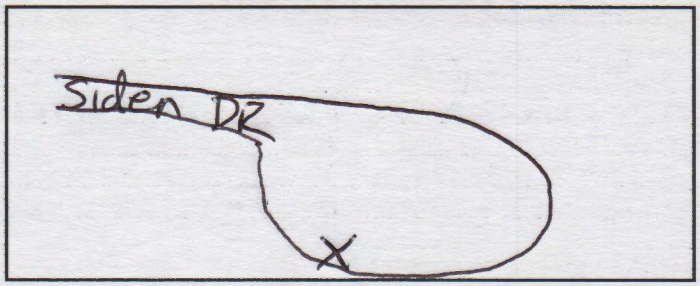
MW-25C

SUBMIT COPIES OF COMPLETED FORM TO:
* COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 8-6-19 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) AA-13-0684
* PERMIT NUMBER OF REPLACEMENT WELL: ____ — ____
* PERSON ABANDONING WELL: Jesse Morgan WELL DRILLER'S LICENSE NUMBER: 106
CIRCLE: MWD / MSD / MGD
* OWNER'S NAME: Anne Arundel Co
* WELL LOCATION:
COUNTY: Anne Arundel Co
NEAREST TOWN: Hanover
TAX MAP ____ BLOCK ____ PARCEL ____
SUBDIVISION: ____
SECTION: ____ LOT: ____
STREET ADDRESS: ~~Fairbanks~~ → Siden DR
LATITUDE 39.145758
LONGITUDE 76.698633

SITE LOCATION MAP



LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Portland Cement	40	0
VOLUME OF MATERIAL USED		
10 Gal		

* TYPE OF WELL BEING ABANDONED:
✓ DRILLED ____ JETTED
____ BORED ____ HAND DUG
____ OTHER (specify) ____

* USE CODE:
____ DOMESTIC ____ MUNICIPAL/PUBLIC
____ IRRIGATION ____ INDUSTRIAL
✓ TEST/OBSERVATION ____ GEOTHERMAL

* TYPE OF CASING:
____ STEEL ✓ PLASTIC
____ CONCRETE ____ OTHER (specify)
____

SIZE OF CASING: 2.5 INCHES IN DIAMETER

DEPTH OF WELL: 40 FEET DEEP

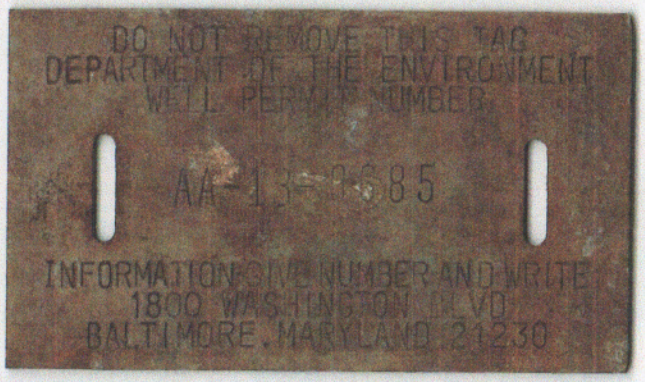
WAS ANY CASING REMOVED? ____ YES ✓ NO
If yes, length removed, in feet: ____

WAS CASING RIPPED OR PERFORATED? ✓ YES ____ NO

Pursuant to § 10-624 of the State Govt. Article of the Maryland Code, personal info requested on this form is used in processing this form pursuant to COMAR 26.04.04. Failure to provide the info may result in this form not being processed. You have the right to inspect, amend, or correct this form. The Maryland Department of the Environment is subject to the Maryland Public Information Act. This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not protected by federal or State Law.

[signature] MGD106 MWD / MSD / MGS 8/23/19
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE# CIRCLE ONE DATE

ORIGINAL


DO NOT REMOVE THIS TAG
DEPARTMENT OF THE ENVIRONMENT
WELL PERMIT NUMBER
AA-13-0685
INFORMATION GIVE NUMBER AND WRITE
1800 WASHINGTON BLVD
BALTIMORE, MARYLAND 21230


AA-13-0684


MW-25C
40DTB

APPENDIX

B 2019 LABORATORY ANALYTICAL REPORTS

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

February 22, 2019

Eric Johnson
WSP USA
13530 Dulles Technology Drive
Suite 300
Herndon, VA 20171

RE: Project: KOPFLEX
Pace Project No.: 92418503

Dear Eric Johnson:
Enclosed are the analytical results for sample(s) received by the laboratory on February 20, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Taylor Ezell
taylor.ezell@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Molly Long, WSP

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

CERTIFICATIONS

Project: KOPFLEX
Pace Project No.: 92418503

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: KOPFLEX
Pace Project No.: 92418503

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92418503001	**Trip Blank**	Water	02/20/19 00:00	02/20/19 14:25
92418503002	**MW-32D**	Water	02/19/19 09:10	02/20/19 14:25
92418503003	**MW-30D-273**	Water	02/19/19 10:20	02/20/19 14:25
92418503004	**MW-30D-413**	Water	02/19/19 10:30	02/20/19 14:25
92418503005	**MW-29D**	Water	02/19/19 10:45	02/20/19 14:25
92418503006	**MW-34D**	Water	02/19/19 11:25	02/20/19 14:25
92418503007	**MW-36D**	Water	02/19/19 12:30	02/20/19 14:25

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: KOPFLEX
Pace Project No.: 92418503

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92418503001	**Trip Blank**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92418503002	**MW-32D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92418503003	**MW-30D-273**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92418503004	**MW-30D-413**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92418503005	**MW-29D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92418503006	**MW-34D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92418503007	**MW-36D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C

Pace Analytical Services, LLC
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(704)875-9092

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: Trip Blank **Lab ID: 92418503001** Collected: 02/20/19 00:00 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		02/20/19 21:19	67-64-1	
Benzene	ND	ug/L	1.0	1		02/20/19 21:19	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/20/19 21:19	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/20/19 21:19	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/20/19 21:19	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/20/19 21:19	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/20/19 21:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/20/19 21:19	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/20/19 21:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/20/19 21:19	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/20/19 21:19	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/20/19 21:19	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/20/19 21:19	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 21:19	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 21:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/20/19 21:19	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/20/19 21:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/20/19 21:19	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/20/19 21:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 21:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 21:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 21:19	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/20/19 21:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		02/20/19 21:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/20/19 21:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		02/20/19 21:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 21:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 21:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 21:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/20/19 21:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 21:19	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/20/19 21:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 21:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 21:19	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		02/20/19 21:19	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		02/20/19 21:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/20/19 21:19	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/20/19 21:19	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/20/19 21:19	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		02/20/19 21:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/20/19 21:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		02/20/19 21:19	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		02/20/19 21:19	91-20-3	
Styrene	ND	ug/L	1.0	1		02/20/19 21:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 21:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 21:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/20/19 21:19	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: Trip Blank **Lab ID: 92418503001** Collected: 02/20/19 00:00 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		02/20/19 21:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 21:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 21:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/20/19 21:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/20/19 21:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/20/19 21:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/20/19 21:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/20/19 21:19	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/20/19 21:19	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/20/19 21:19	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		02/20/19 21:19	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		02/20/19 21:19	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		02/20/19 21:19	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		02/20/19 21:19	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		02/20/19 21:19	17060-07-0	
Toluene-d8 (S)	114	%	70-130	1		02/20/19 21:19	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		02/21/19 13:33	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	92	%	50-150	1		02/21/19 13:33	17060-07-0	
Toluene-d8 (S)	100	%	50-150	1		02/21/19 13:33	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-32D **Lab ID: 92418503002** Collected: 02/19/19 09:10 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		02/20/19 22:48	67-64-1	
Benzene	ND	ug/L	1.0	1		02/20/19 22:48	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/20/19 22:48	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/20/19 22:48	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/20/19 22:48	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/20/19 22:48	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/20/19 22:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/20/19 22:48	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/20/19 22:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/20/19 22:48	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/20/19 22:48	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/20/19 22:48	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/20/19 22:48	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 22:48	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 22:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/20/19 22:48	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/20/19 22:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/20/19 22:48	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/20/19 22:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 22:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 22:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 22:48	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/20/19 22:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		02/20/19 22:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/20/19 22:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		02/20/19 22:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 22:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 22:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 22:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/20/19 22:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 22:48	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/20/19 22:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 22:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 22:48	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		02/20/19 22:48	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		02/20/19 22:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/20/19 22:48	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/20/19 22:48	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/20/19 22:48	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		02/20/19 22:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/20/19 22:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		02/20/19 22:48	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		02/20/19 22:48	91-20-3	
Styrene	ND	ug/L	1.0	1		02/20/19 22:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 22:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 22:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/20/19 22:48	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-32D **Lab ID: 92418503002** Collected: 02/19/19 09:10 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		02/20/19 22:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 22:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 22:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/20/19 22:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/20/19 22:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/20/19 22:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/20/19 22:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/20/19 22:48	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/20/19 22:48	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/20/19 22:48	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		02/20/19 22:48	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		02/20/19 22:48	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		02/20/19 22:48	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		02/20/19 22:48	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		02/20/19 22:48	17060-07-0	
Toluene-d8 (S)	112	%	70-130	1		02/20/19 22:48	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		02/21/19 13:52	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%	50-150	1		02/21/19 13:52	17060-07-0	
Toluene-d8 (S)	103	%	50-150	1		02/21/19 13:52	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-30D-273 **Lab ID: 92418503003** Collected: 02/19/19 10:20 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		02/21/19 00:52	67-64-1	
Benzene	ND	ug/L	1.0	1		02/21/19 00:52	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/21/19 00:52	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/21/19 00:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/21/19 00:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/21/19 00:52	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/21/19 00:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/21/19 00:52	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/21/19 00:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/21/19 00:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/21/19 00:52	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/21/19 00:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/21/19 00:52	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/21/19 00:52	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/21/19 00:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/21/19 00:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/21/19 00:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/21/19 00:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/21/19 00:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/21/19 00:52	75-71-8	
1,1-Dichloroethane	**1.1**	ug/L	1.0	1		02/21/19 00:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/21/19 00:52	107-06-2	
1,1-Dichloroethene	**47.2**	ug/L	1.0	1		02/21/19 00:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/21/19 00:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/21/19 00:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/21/19 00:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/21/19 00:52	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/21/19 00:52	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/21/19 00:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/21/19 00:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/21/19 00:52	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		02/21/19 00:52	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		02/21/19 00:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/21/19 00:52	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/21/19 00:52	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/21/19 00:52	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		02/21/19 00:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/21/19 00:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		02/21/19 00:52	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		02/21/19 00:52	91-20-3	
Styrene	ND	ug/L	1.0	1		02/21/19 00:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/21/19 00:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/21/19 00:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/21/19 00:52	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-30D-273 **Lab ID: 92418503003** Collected: 02/19/19 10:20 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		02/21/19 00:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/21/19 00:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/21/19 00:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/21/19 00:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/21/19 00:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/21/19 00:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/21/19 00:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/21/19 00:52	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		02/21/19 00:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		02/21/19 00:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		02/21/19 00:52	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	105	%	70-130	1		02/21/19 00:52	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		02/21/19 00:52	17060-07-0	
Toluene-d8 (S)	120	%	70-130	1		02/21/19 00:52	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**23.1**	ug/L	2.0	1		02/21/19 14:12	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	50-150	1		02/21/19 14:12	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		02/21/19 14:12	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-30D-413 **Lab ID: 92418503004** Collected: 02/19/19 10:30 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		02/20/19 23:42	67-64-1	
Benzene	ND	ug/L	1.0	1		02/20/19 23:42	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/20/19 23:42	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/20/19 23:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/20/19 23:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/20/19 23:42	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/20/19 23:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/20/19 23:42	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/20/19 23:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/20/19 23:42	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/20/19 23:42	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/20/19 23:42	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/20/19 23:42	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 23:42	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 23:42	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/20/19 23:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/20/19 23:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/20/19 23:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/20/19 23:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:42	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/20/19 23:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		02/20/19 23:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/20/19 23:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:42	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		02/20/19 23:42	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		02/20/19 23:42	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/20/19 23:42	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/20/19 23:42	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/20/19 23:42	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		02/20/19 23:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/20/19 23:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		02/20/19 23:42	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		02/20/19 23:42	91-20-3	
Styrene	ND	ug/L	1.0	1		02/20/19 23:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 23:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 23:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/20/19 23:42	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-30D-413 **Lab ID: 92418503004** Collected: 02/19/19 10:30 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		02/20/19 23:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:42	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/20/19 23:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/20/19 23:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/20/19 23:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/20/19 23:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/20/19 23:42	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/20/19 23:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/20/19 23:42	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		02/20/19 23:42	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		02/20/19 23:42	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		02/20/19 23:42	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		02/20/19 23:42	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		02/20/19 23:42	17060-07-0	
Toluene-d8 (S)	115	%	70-130	1		02/20/19 23:42	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		02/21/19 14:31	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%	50-150	1		02/21/19 14:31	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		02/21/19 14:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-29D **Lab ID: 92418503005** Collected: 02/19/19 10:45 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		02/20/19 23:24	67-64-1	
Benzene	ND	ug/L	1.0	1		02/20/19 23:24	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/20/19 23:24	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/20/19 23:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/20/19 23:24	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/20/19 23:24	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/20/19 23:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/20/19 23:24	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/20/19 23:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/20/19 23:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/20/19 23:24	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/20/19 23:24	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/20/19 23:24	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 23:24	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 23:24	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/20/19 23:24	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/20/19 23:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/20/19 23:24	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/20/19 23:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:24	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/20/19 23:24	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		02/20/19 23:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/20/19 23:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:24	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:24	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:24	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		02/20/19 23:24	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		02/20/19 23:24	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/20/19 23:24	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/20/19 23:24	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/20/19 23:24	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		02/20/19 23:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/20/19 23:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		02/20/19 23:24	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		02/20/19 23:24	91-20-3	
Styrene	ND	ug/L	1.0	1		02/20/19 23:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 23:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 23:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/20/19 23:24	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
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ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-29D **Lab ID: 92418503005** Collected: 02/19/19 10:45 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		02/20/19 23:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/20/19 23:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/20/19 23:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/20/19 23:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/20/19 23:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/20/19 23:24	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/20/19 23:24	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/20/19 23:24	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		02/20/19 23:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		02/20/19 23:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		02/20/19 23:24	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		02/20/19 23:24	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		02/20/19 23:24	17060-07-0	
Toluene-d8 (S)	116	%	70-130	1		02/20/19 23:24	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		02/21/19 14:51	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%	50-150	1		02/21/19 14:51	17060-07-0	
Toluene-d8 (S)	105	%	50-150	1		02/21/19 14:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-34D **Lab ID: 92418503006** Collected: 02/19/19 11:25 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		02/20/19 23:06	67-64-1	
Benzene	ND	ug/L	1.0	1		02/20/19 23:06	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/20/19 23:06	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/20/19 23:06	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/20/19 23:06	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/20/19 23:06	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/20/19 23:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/20/19 23:06	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/20/19 23:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/20/19 23:06	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/20/19 23:06	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/20/19 23:06	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/20/19 23:06	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 23:06	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/20/19 23:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/20/19 23:06	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/20/19 23:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/20/19 23:06	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/20/19 23:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:06	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/20/19 23:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		02/20/19 23:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/20/19 23:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/20/19 23:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/20/19 23:06	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/20/19 23:06	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		02/20/19 23:06	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		02/20/19 23:06	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/20/19 23:06	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/20/19 23:06	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/20/19 23:06	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		02/20/19 23:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/20/19 23:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		02/20/19 23:06	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		02/20/19 23:06	91-20-3	
Styrene	ND	ug/L	1.0	1		02/20/19 23:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 23:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/20/19 23:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/20/19 23:06	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-34D **Lab ID: 92418503006** Collected: 02/19/19 11:25 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		02/20/19 23:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/20/19 23:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/20/19 23:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/20/19 23:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/20/19 23:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/20/19 23:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/20/19 23:06	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/20/19 23:06	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/20/19 23:06	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		02/20/19 23:06	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		02/20/19 23:06	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		02/20/19 23:06	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		02/20/19 23:06	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		02/20/19 23:06	17060-07-0	
Toluene-d8 (S)	111	%	70-130	1		02/20/19 23:06	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		02/21/19 15:10	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	1		02/21/19 15:10	17060-07-0	
Toluene-d8 (S)	100	%	50-150	1		02/21/19 15:10	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-36D **Lab ID: 92418503007** Collected: 02/19/19 12:30 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		02/21/19 00:35	67-64-1	
Benzene	ND	ug/L	1.0	1		02/21/19 00:35	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		02/21/19 00:35	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		02/21/19 00:35	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		02/21/19 00:35	75-27-4	
Bromoform	ND	ug/L	1.0	1		02/21/19 00:35	75-25-2	
Bromomethane	ND	ug/L	2.0	1		02/21/19 00:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		02/21/19 00:35	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		02/21/19 00:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		02/21/19 00:35	108-90-7	
Chloroethane	ND	ug/L	1.0	1		02/21/19 00:35	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/21/19 00:35	67-66-3	
Chloromethane	ND	ug/L	1.0	1		02/21/19 00:35	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		02/21/19 00:35	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		02/21/19 00:35	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		02/21/19 00:35	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		02/21/19 00:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		02/21/19 00:35	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		02/21/19 00:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:35	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		02/21/19 00:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		02/21/19 00:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		02/21/19 00:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		02/21/19 00:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		02/21/19 00:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		02/21/19 00:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		02/21/19 00:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		02/21/19 00:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		02/21/19 00:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		02/21/19 00:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		02/21/19 00:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		02/21/19 00:35	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		02/21/19 00:35	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		02/21/19 00:35	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		02/21/19 00:35	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		02/21/19 00:35	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		02/21/19 00:35	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		02/21/19 00:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		02/21/19 00:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		02/21/19 00:35	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		02/21/19 00:35	91-20-3	
Styrene	ND	ug/L	1.0	1		02/21/19 00:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		02/21/19 00:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		02/21/19 00:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		02/21/19 00:35	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: KOPFLEX
Pace Project No.: 92418503

Sample: MW-36D **Lab ID: 92418503007** Collected: 02/19/19 12:30 Received: 02/20/19 14:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		02/21/19 00:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		02/21/19 00:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		02/21/19 00:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		02/21/19 00:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		02/21/19 00:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		02/21/19 00:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		02/21/19 00:35	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		02/21/19 00:35	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		02/21/19 00:35	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		02/21/19 00:35	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		02/21/19 00:35	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		02/21/19 00:35	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		02/21/19 00:35	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		02/21/19 00:35	17060-07-0	
Toluene-d8 (S)	113	%	70-130	1		02/21/19 00:35	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		02/21/19 15:29	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%	50-150	1		02/21/19 15:29	17060-07-0	
Toluene-d8 (S)	100	%	50-150	1		02/21/19 15:29	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: KOPFLEX
Pace Project No.: 92418503

QC Batch: 459272 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92418503001, 92418503002, 92418503003, 92418503004, 92418503005, 92418503006, 92418503007

METHOD BLANK: 2503004 Matrix: Water
Associated Lab Samples: 92418503001, 92418503002, 92418503003, 92418503004, 92418503005, 92418503006, 92418503007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/20/19 21:02	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/20/19 21:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/20/19 21:02	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/20/19 21:02	
1,1-Dichloroethane	ug/L	ND	1.0	02/20/19 21:02	
1,1-Dichloroethene	ug/L	ND	1.0	02/20/19 21:02	
1,1-Dichloropropene	ug/L	ND	1.0	02/20/19 21:02	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	02/20/19 21:02	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/20/19 21:02	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	02/20/19 21:02	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	02/20/19 21:02	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/20/19 21:02	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/20/19 21:02	
1,2-Dichloroethane	ug/L	ND	1.0	02/20/19 21:02	
1,2-Dichloropropane	ug/L	ND	1.0	02/20/19 21:02	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/20/19 21:02	
1,3-Dichloropropane	ug/L	ND	1.0	02/20/19 21:02	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/20/19 21:02	
2,2-Dichloropropane	ug/L	ND	1.0	02/20/19 21:02	
2-Butanone (MEK)	ug/L	ND	5.0	02/20/19 21:02	
2-Chlorotoluene	ug/L	ND	1.0	02/20/19 21:02	
2-Hexanone	ug/L	ND	5.0	02/20/19 21:02	
4-Chlorotoluene	ug/L	ND	1.0	02/20/19 21:02	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/20/19 21:02	
Acetone	ug/L	ND	25.0	02/20/19 21:02	
Benzene	ug/L	ND	1.0	02/20/19 21:02	
Bromobenzene	ug/L	ND	1.0	02/20/19 21:02	
Bromochloromethane	ug/L	ND	1.0	02/20/19 21:02	
Bromodichloromethane	ug/L	ND	1.0	02/20/19 21:02	
Bromoform	ug/L	ND	1.0	02/20/19 21:02	
Bromomethane	ug/L	ND	2.0	02/20/19 21:02	
Carbon tetrachloride	ug/L	ND	1.0	02/20/19 21:02	
Chlorobenzene	ug/L	ND	1.0	02/20/19 21:02	
Chloroethane	ug/L	ND	1.0	02/20/19 21:02	
Chloroform	ug/L	ND	5.0	02/20/19 21:02	
Chloromethane	ug/L	ND	1.0	02/20/19 21:02	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/20/19 21:02	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/20/19 21:02	
Dibromochloromethane	ug/L	ND	1.0	02/20/19 21:02	
Dibromomethane	ug/L	ND	1.0	02/20/19 21:02	
Dichlorodifluoromethane	ug/L	ND	1.0	02/20/19 21:02	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: KOPFLEX
Pace Project No.: 92418503

METHOD BLANK: 2503004 Matrix: Water
Associated Lab Samples: 92418503001, 92418503002, 92418503003, 92418503004, 92418503005, 92418503006, 92418503007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	02/20/19 21:02	
Ethylbenzene	ug/L	ND	1.0	02/20/19 21:02	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	02/20/19 21:02	
m&p-Xylene	ug/L	ND	2.0	02/20/19 21:02	
Methyl-tert-butyl ether	ug/L	ND	1.0	02/20/19 21:02	
Methylene Chloride	ug/L	ND	5.0	02/20/19 21:02	
Naphthalene	ug/L	ND	1.0	02/20/19 21:02	
o-Xylene	ug/L	ND	1.0	02/20/19 21:02	
p-Isopropyltoluene	ug/L	ND	1.0	02/20/19 21:02	
Styrene	ug/L	ND	1.0	02/20/19 21:02	
Tetrachloroethene	ug/L	ND	1.0	02/20/19 21:02	
Toluene	ug/L	ND	1.0	02/20/19 21:02	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/20/19 21:02	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/20/19 21:02	
Trichloroethene	ug/L	ND	1.0	02/20/19 21:02	
Trichlorofluoromethane	ug/L	ND	1.0	02/20/19 21:02	
Vinyl acetate	ug/L	ND	2.0	02/20/19 21:02	
Vinyl chloride	ug/L	ND	1.0	02/20/19 21:02	
Xylene (Total)	ug/L	ND	1.0	02/20/19 21:02	
1,2-Dichloroethane-d4 (S)	%	96	70-130	02/20/19 21:02	
4-Bromofluorobenzene (S)	%	103	70-130	02/20/19 21:02	
Toluene-d8 (S)	%	113	70-130	02/20/19 21:02	

LABORATORY CONTROL SAMPLE: 2503005

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.5	107	70-130	
1,1,1-Trichloroethane	ug/L	50	47.4	95	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	48.0	96	70-130	
1,1,2-Trichloroethane	ug/L	50	51.7	103	70-130	
1,1-Dichloroethane	ug/L	50	47.6	95	70-130	
1,1-Dichloroethene	ug/L	50	49.4	99	70-130	
1,1-Dichloropropene	ug/L	50	45.6	91	70-130	
1,2,3-Trichlorobenzene	ug/L	50	53.7	107	70-130	
1,2,3-Trichloropropane	ug/L	50	49.0	98	70-130	
1,2,4-Trichlorobenzene	ug/L	50	52.5	105	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	49.1	98	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	53.5	107	70-130	
1,2-Dichlorobenzene	ug/L	50	49.1	98	70-130	
1,2-Dichloroethane	ug/L	50	45.8	92	70-130	
1,2-Dichloropropane	ug/L	50	50.9	102	70-130	
1,3-Dichlorobenzene	ug/L	50	48.9	98	70-130	
1,3-Dichloropropane	ug/L	50	55.0	110	70-131	
1,4-Dichlorobenzene	ug/L	50	49.4	99	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: KOPFLEX
Pace Project No.: 92418503

LABORATORY CONTROL SAMPLE: 2503005

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	49.4	99	69-130	
2-Butanone (MEK)	ug/L	100	99.0	99	64-135	
2-Chlorotoluene	ug/L	50	48.0	96	70-130	
2-Hexanone	ug/L	100	101	101	66-135	
4-Chlorotoluene	ug/L	50	48.0	96	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.1	92	70-130	
Acetone	ug/L	100	96.1	96	61-157	
Benzene	ug/L	50	49.3	99	70-130	
Bromobenzene	ug/L	50	49.7	99	70-130	
Bromochloromethane	ug/L	50	44.2	88	70-130	
Bromodichloromethane	ug/L	50	49.2	98	70-130	
Bromoform	ug/L	50	51.8	104	70-130	
Bromomethane	ug/L	50	54.8	110	38-130	
Carbon tetrachloride	ug/L	50	48.9	98	70-130	
Chlorobenzene	ug/L	50	47.8	96	70-130	
Chloroethane	ug/L	50	35.4	71	37-142	
Chloroform	ug/L	50	47.1	94	70-130	
Chloromethane	ug/L	50	51.4	103	48-130	
cis-1,2-Dichloroethene	ug/L	50	47.5	95	70-130	
cis-1,3-Dichloropropene	ug/L	50	53.4	107	70-130	
Dibromochloromethane	ug/L	50	55.0	110	70-130	
Dibromomethane	ug/L	50	45.5	91	70-130	
Dichlorodifluoromethane	ug/L	50	53.0	106	53-134	
Diisopropyl ether	ug/L	50	50.4	101	70-135	
Ethylbenzene	ug/L	50	48.3	97	70-130	
Hexachloro-1,3-butadiene	ug/L	50	50.9	102	68-132	
m&p-Xylene	ug/L	100	93.3	93	70-130	
Methyl-tert-butyl ether	ug/L	50	48.2	96	70-130	
Methylene Chloride	ug/L	50	46.4	93	67-132	
Naphthalene	ug/L	50	52.4	105	70-130	
o-Xylene	ug/L	50	48.9	98	70-130	
p-Isopropyltoluene	ug/L	50	49.8	100	70-130	
Styrene	ug/L	50	47.9	96	70-130	
Tetrachloroethene	ug/L	50	47.7	95	69-130	
Toluene	ug/L	50	43.8	88	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.3	95	70-130	
trans-1,3-Dichloropropene	ug/L	50	51.7	103	70-130	
Trichloroethene	ug/L	50	51.0	102	70-130	
Trichlorofluoromethane	ug/L	50	44.8	90	63-130	
Vinyl acetate	ug/L	100	107	107	55-143	
Vinyl chloride	ug/L	50	50.5	101	70-131	
Xylene (Total)	ug/L	150	142	95	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			94	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: KOPFLEX
Pace Project No.: 92418503

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2503006 2503007

Parameter	Units	92418503007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	20.6	20.1	103	100	73-134	3	30	
1,1,1-Trichloroethane	ug/L	ND	20	20	19.4	20.0	97	100	82-143	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.4	19.0	97	95	70-136	2	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.5	19.9	98	100	70-135	2	30	
1,1-Dichloroethane	ug/L	ND	20	20	18.5	19.2	92	96	70-139	4	30	
1,1-Dichloroethene	ug/L	ND	20	20	19.8	19.8	99	99	70-154	0	30	
1,1-Dichloropropene	ug/L	ND	20	20	17.7	19.2	88	96	70-149	8	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	22.3	21.1	112	106	70-135	6	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	19.2	19.6	96	98	71-137	2	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.9	20.7	105	104	73-140	1	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	20.0	20.1	100	100	65-134	1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	20.4	20.1	102	100	70-137	1	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	20.1	20.1	101	100	70-133	0	30	
1,2-Dichloroethane	ug/L	ND	20	20	17.6	18.0	88	90	70-137	2	30	
1,2-Dichloropropane	ug/L	ND	20	20	18.6	19.1	93	96	70-140	3	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	19.2	20.5	96	102	70-135	6	30	
1,3-Dichloropropane	ug/L	ND	20	20	19.3	19.9	97	99	70-143	3	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.6	20.2	98	101	70-133	3	30	
2,2-Dichloropropane	ug/L	ND	20	20	20.6	21.6	103	108	61-148	5	30	
2-Butanone (MEK)	ug/L	ND	40	40	36.8	37.2	92	93	60-139	1	30	
2-Chlorotoluene	ug/L	ND	20	20	19.3	19.7	96	99	70-144	2	30	
2-Hexanone	ug/L	ND	40	40	37.7	38.2	94	96	65-138	1	30	
4-Chlorotoluene	ug/L	ND	20	20	18.5	19.6	93	98	70-137	5	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	37.4	36.8	93	92	65-135	2	30	
Acetone	ug/L	ND	40	40	39.3	39.0	98	97	60-148	1	30	
Benzene	ug/L	ND	20	20	19.9	20.0	99	100	70-151	1	30	
Bromobenzene	ug/L	ND	20	20	19.8	20.7	99	103	70-136	4	30	
Bromochloromethane	ug/L	ND	20	20	19.0	20.3	95	102	70-141	7	30	
Bromodichloromethane	ug/L	ND	20	20	19.2	19.9	96	99	70-138	4	30	
Bromoform	ug/L	ND	20	20	17.7	18.6	88	93	63-130	5	30	
Bromomethane	ug/L	ND	20	20	16.8	21.1	84	106	15-152	23	30	
Carbon tetrachloride	ug/L	ND	20	20	20.3	20.7	101	104	70-143	2	30	
Chlorobenzene	ug/L	ND	20	20	19.7	19.9	99	100	70-138	1	30	
Chloroethane	ug/L	ND	20	20	18.9	19.7	95	99	52-163	4	30	
Chloroform	ug/L	ND	20	20	17.7	18.2	89	91	70-139	3	30	
Chloromethane	ug/L	ND	20	20	14.3	11.8	71	59	41-139	19	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	18.4	19.0	92	95	70-141	3	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.1	20.0	101	100	70-137	1	30	
Dibromochloromethane	ug/L	ND	20	20	20.0	20.2	100	101	70-134	1	30	
Dibromomethane	ug/L	ND	20	20	21.2	21.4	106	107	70-138	1	30	
Dichlorodifluoromethane	ug/L	ND	20	20	19.8	19.8	99	99	47-155	0	30	
Diisopropyl ether	ug/L	ND	20	20	17.8	17.8	89	89	63-144	0	30	
Ethylbenzene	ug/L	ND	20	20	20.2	20.8	101	104	66-153	3	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	22.6	21.5	113	108	65-149	5	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: KOPFLEX
Pace Project No.: 92418503

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2503006 2503007

Parameter	Units	92418503007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	ND	40	40	40.8	41.9	102	105	69-152	3	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	18.3	18.8	92	94	54-156	2	30	
Methylene Chloride	ug/L	ND	20	20	17.9	17.7	89	89	42-159	1	30	
Naphthalene	ug/L	ND	20	20	19.5	19.0	98	95	61-148	2	30	
o-Xylene	ug/L	ND	20	20	20.3	20.4	102	102	70-148	0	30	
p-Isopropyltoluene	ug/L	ND	20	20	20.3	20.8	102	104	70-146	2	30	
Styrene	ug/L	ND	20	20	20.1	20.3	100	101	70-135	1	30	
Tetrachloroethene	ug/L	ND	20	20	21.1	22.6	105	113	59-143	7	30	
Toluene	ug/L	ND	20	20	19.5	20.1	98	100	59-148	3	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.7	19.4	93	97	70-146	4	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.0	19.8	100	99	70-135	1	30	
Trichloroethene	ug/L	ND	20	20	19.8	20.8	99	104	70-147	5	30	
Trichlorofluoromethane	ug/L	ND	20	20	21.2	22.0	106	110	70-148	4	30	
Vinyl acetate	ug/L	ND	40	40	38.0	38.0	95	95	49-151	0	30	
Vinyl chloride	ug/L	ND	20	20	20.4	20.6	102	103	70-156	1	30	
Xylene (Total)	ug/L	ND	60	60	61.1	62.3	102	104	63-158	2	30	
1,2-Dichloroethane-d4 (S)	%						91	91	70-130			
4-Bromofluorobenzene (S)	%						97	98	70-130			
Toluene-d8 (S)	%						97	97	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: KOPFLEX
Pace Project No.: 92418503

QC Batch: 459387 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92418503001, 92418503002, 92418503003, 92418503004, 92418503005, 92418503006, 92418503007

METHOD BLANK: 2503363 Matrix: Water
Associated Lab Samples: 92418503001, 92418503002, 92418503003, 92418503004, 92418503005, 92418503006, 92418503007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	02/21/19 13:13	
1,2-Dichloroethane-d4 (S)	%	96	50-150	02/21/19 13:13	
Toluene-d8 (S)	%	103	50-150	02/21/19 13:13	

LABORATORY CONTROL SAMPLE: 2503364

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	18.3	92	71-125	
1,2-Dichloroethane-d4 (S)	%			99	50-150	
Toluene-d8 (S)	%			101	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2503365 2503366

Parameter	Units	92418503002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	20.3	21.9	102	109	50-150	7	30	
1,2-Dichloroethane-d4 (S)	%						95	97	50-150		30	
Toluene-d8 (S)	%						98	98	50-150		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: KOPFLEX
Pace Project No.: 92418503

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: KOPFLEX
Pace Project No.: 92418503

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92418503001	**Trip Blank**	EPA 8260B	459272		
92418503002	**MW-32D**	EPA 8260B	459272		
92418503003	**MW-30D-273**	EPA 8260B	459272		
92418503004	**MW-30D-413**	EPA 8260B	459272		
92418503005	**MW-29D**	EPA 8260B	459272		
92418503006	**MW-34D**	EPA 8260B	459272		
92418503007	**MW-36D**	EPA 8260B	459272		
92418503001	**Trip Blank**	EPA 8260B Mod.	459387		
92418503002	**MW-32D**	EPA 8260B Mod.	459387		
92418503003	**MW-30D-273**	EPA 8260B Mod.	459387		
92418503004	**MW-30D-413**	EPA 8260B Mod.	459387		
92418503005	**MW-29D**	EPA 8260B Mod.	459387		
92418503006	**MW-34D**	EPA 8260B Mod.	459387		
92418503007	**MW-36D**	EPA 8260B Mod.	459387		

Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: WSP

Project # WO# : 92418503

92418503

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

Custody Seal Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No

Date/Initials Person Examining Contents: 2-20-19

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

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 92T048 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp (°C): 3.6 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C):

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☑ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☑ Yes	☐ No	☐ N/A	10. Trip Blank vials
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☑ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: (TR) **Date:** 2/21

Project Manager SRF Review: (TR) **Date:** 2/21

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # WO# : 92418503

PM: PTE Due Date: 02/27/19

CLIENT: 92-WSP

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1																6													
2																6													
3																6													
4																6													
5																6													
6																6													
7																2	clear												
8																2	clear												
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

CHAIN-OF-CUSTODY RECORD

Page 1 of ___

WSP USA Office Address: 13530 Dulles Technology Dr. Ste 300 Herndon, VA

Project Name: kaflex

WSP USA Contact Name: eric johnson

Project Location: Hanover, MD

WSP USA Contact E-mail: eric.johnson @wsp.com

Project Number & Task: 31401545.011/1

WSP USA Contact Phone: 703 7216500

Sampler(s) Name(s): Crexi Molly

Sampler(s) Signature(s):

No. 009921

Laboratory Name & Location: Pace

Laboratory Project Manager: Taylor Etzel

Requested Turn-Around-Time: [X] Standard [ ] 24 HR [ ] 48 HR [ ] 72 HR [ ] ___ HR

924/8503

Requested Analyses & Preservatives

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	VOCs (8260)	1,4-dioxane (8260 SIM)	Sample Comments
Trip Blank		lab provided				4	X	X	001
MW-32D	GW	2/19/19		09	10	6	X	X	002
MW-30D-273				10	20	6	X	X	003
MW-30D-413				10	30	6	X	X	004
MW-29D				10	45	6	X	X	005
MW-34D				11	25	6	X	X	006
MW-36D				12	30	6	X	X	007

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
	2/19/19	1600	fedex				8127 8179 5545
Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Number of Packages	Custody Seal Number(s)
			Stock Room Office	2-20-19	1425		

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

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

June 03, 2019

Eric Johnson
WSP USA
13530 Dulles Technology Drive
Suite 300
Herndon, VA 20171

RE: Project: Kopflex offsite
Pace Project No.: 92430519

Dear Eric Johnson:
Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Taylor Ezell
taylor.ezell@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Molly Long, WSP

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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CERTIFICATIONS

Project: Kopflex offsite
Pace Project No.: 92430519

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: Kopflex offsite
Pace Project No.: 92430519

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92430519001	**MW-46D**	Water	05/21/19 17:05	05/24/19 09:50
92430519002	**MW-45**	Water	05/22/19 08:45	05/24/19 09:50
92430519003	**MW-24D**	Water	05/22/19 09:05	05/24/19 09:50
92430519004	**MW-31D**	Water	05/22/19 10:45	05/24/19 09:50
92430519005	**MW-35D**	Water	05/22/19 11:10	05/24/19 09:50
92430519006	**MW-34D**	Water	05/22/19 11:30	05/24/19 09:50
92430519007	**MW-32D**	Water	05/22/19 11:55	05/24/19 09:50
92430519008	**MW-36D**	Water	05/22/19 12:10	05/24/19 09:50
92430519009	**MW-33D-235**	Water	05/22/19 13:55	05/24/19 09:50
92430519010	**MW-33D-295**	Water	05/22/19 13:45	05/24/19 09:50
92430519011	**MW-30D-273**	Water	05/22/19 14:20	05/24/19 09:50
92430519012	**MW-30D-413**	Water	05/22/19 14:25	05/24/19 09:50
92430519013	**MW-29D**	Water	05/22/19 14:45	05/24/19 09:50
92430519014	**MW-28D**	Water	05/22/19 15:20	05/24/19 09:50
92430519015	**DUP 052219A**	Water	05/22/19 09:00	05/24/19 09:50
92430519016	**MW-25D-130**	Water	05/22/19 15:55	05/24/19 09:50
92430519017	**MW-25D-190**	Water	05/22/19 15:40	05/24/19 09:50
92430519018	**Trip Blank**	Water	05/22/19 00:00	05/24/19 09:50

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SAMPLE ANALYTE COUNT

Project: Kopflex offsite
Pace Project No.: 92430519

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92430519001	MW-46D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519002	MW-45	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519003	MW-24D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519004	MW-31D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519005	MW-35D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519006	MW-34D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519007	MW-32D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519008	MW-36D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519009	MW-33D-235	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519010	MW-33D-295	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519011	MW-30D-273	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519012	MW-30D-413	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519013	MW-29D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519014	MW-28D	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519015	DUP 052219A	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519016	MW-25D-130	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519017	MW-25D-190	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C
92430519018	Trip Blank	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	SAS	3	PASI-C

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-46D **Lab ID: 92430519001** Collected: 05/21/19 17:05 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 16:09	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 16:09	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 16:09	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 16:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 16:09	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 16:09	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 16:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 16:09	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 16:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 16:09	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 16:09	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 16:09	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 16:09	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 16:09	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 16:09	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 16:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 16:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 16:09	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 16:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:09	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 16:09	75-71-8	
1,1-Dichloroethane	**26.1**	ug/L	1.0	1		05/30/19 16:09	75-34-3	
1,2-Dichloroethane	**1.0**	ug/L	1.0	1		05/30/19 16:09	107-06-2	
1,1-Dichloroethene	**125**	ug/L	1.0	1		05/30/19 16:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 16:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 16:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 16:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 16:09	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 16:09	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 16:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 16:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 16:09	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 16:09	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 16:09	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 16:09	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 16:09	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 16:09	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 16:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 16:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 16:09	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 16:09	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 16:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 16:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 16:09	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 16:09	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-46D **Lab ID: 92430519001** Collected: 05/21/19 17:05 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 16:09	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:09	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:09	120-82-1	
1,1,1-Trichloroethane	**10.2**	ug/L	1.0	1		05/30/19 16:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 16:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 16:09	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 16:09	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 16:09	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 16:09	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 16:09	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 16:09	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 16:09	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 16:09	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		05/30/19 16:09	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		05/30/19 16:09	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 16:09	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**88.0**	ug/L	2.0	1		05/29/19 13:28	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	50-150	1		05/29/19 13:28	17060-07-0	
Toluene-d8 (S)	103	%	50-150	1		05/29/19 13:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-45 **Lab ID: 92430519002** Collected: 05/22/19 08:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	50.0	2		05/29/19 18:14	67-64-1	
Benzene	ND	ug/L	2.0	2		05/29/19 18:14	71-43-2	
Bromobenzene	ND	ug/L	2.0	2		05/29/19 18:14	108-86-1	
Bromochloromethane	ND	ug/L	2.0	2		05/29/19 18:14	74-97-5	
Bromodichloromethane	ND	ug/L	2.0	2		05/29/19 18:14	75-27-4	
Bromoform	ND	ug/L	2.0	2		05/29/19 18:14	75-25-2	
Bromomethane	ND	ug/L	4.0	2		05/29/19 18:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	2		05/29/19 18:14	78-93-3	
Carbon tetrachloride	ND	ug/L	2.0	2		05/29/19 18:14	56-23-5	
Chlorobenzene	ND	ug/L	2.0	2		05/29/19 18:14	108-90-7	
Chloroethane	ND	ug/L	2.0	2		05/29/19 18:14	75-00-3	
Chloroform	ND	ug/L	10.0	2		05/29/19 18:14	67-66-3	
Chloromethane	ND	ug/L	2.0	2		05/29/19 18:14	74-87-3	
2-Chlorotoluene	ND	ug/L	2.0	2		05/29/19 18:14	95-49-8	
4-Chlorotoluene	ND	ug/L	2.0	2		05/29/19 18:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	2		05/29/19 18:14	96-12-8	
Dibromochloromethane	ND	ug/L	2.0	2		05/29/19 18:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	2		05/29/19 18:14	106-93-4	
Dibromomethane	ND	ug/L	2.0	2		05/29/19 18:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	2.0	2		05/29/19 18:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	2.0	2		05/29/19 18:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	2.0	2		05/29/19 18:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	2.0	2		05/29/19 18:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0	2		05/29/19 18:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	2		05/29/19 18:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	2		05/29/19 18:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	2		05/29/19 18:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	2		05/29/19 18:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	2.0	2		05/29/19 18:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	2.0	2		05/29/19 18:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	2.0	2		05/29/19 18:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	2.0	2		05/29/19 18:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	2.0	2		05/29/19 18:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	2.0	2		05/29/19 18:14	10061-02-6	
Diisopropyl ether	ND	ug/L	2.0	2		05/29/19 18:14	108-20-3	
Ethylbenzene	ND	ug/L	2.0	2		05/29/19 18:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	2		05/29/19 18:14	87-68-3	
2-Hexanone	ND	ug/L	10.0	2		05/29/19 18:14	591-78-6	
p-Isopropyltoluene	ND	ug/L	2.0	2		05/29/19 18:14	99-87-6	
Methylene Chloride	ND	ug/L	10.0	2		05/29/19 18:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	2		05/29/19 18:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	2.0	2		05/29/19 18:14	1634-04-4	
Naphthalene	ND	ug/L	2.0	2		05/29/19 18:14	91-20-3	
Styrene	ND	ug/L	2.0	2		05/29/19 18:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	2		05/29/19 18:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	2		05/29/19 18:14	79-34-5	
Tetrachloroethene	ND	ug/L	2.0	2		05/29/19 18:14	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-45 **Lab ID: 92430519002** Collected: 05/22/19 08:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	2.0	2		05/29/19 18:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	2		05/29/19 18:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	2		05/29/19 18:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	2.0	2		05/29/19 18:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	2.0	2		05/29/19 18:14	79-00-5	
Trichloroethene	ND	ug/L	2.0	2		05/29/19 18:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	2		05/29/19 18:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.0	2		05/29/19 18:14	96-18-4	
Vinyl acetate	ND	ug/L	4.0	2		05/29/19 18:14	108-05-4	
Vinyl chloride	ND	ug/L	2.0	2		05/29/19 18:14	75-01-4	
Xylene (Total)	ND	ug/L	2.0	2		05/29/19 18:14	1330-20-7	
m&p-Xylene	ND	ug/L	4.0	2		05/29/19 18:14	179601-23-1	
o-Xylene	ND	ug/L	2.0	2		05/29/19 18:14	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	94	%	70-130	2		05/29/19 18:14	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130	2		05/29/19 18:14	17060-07-0	
Toluene-d8 (S)	98	%	70-130	2		05/29/19 18:14	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 13:48	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%	50-150	1		05/29/19 13:48	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		05/29/19 13:48	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-24D **Lab ID: 92430519003** Collected: 05/22/19 09:05 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	250	10		06/01/19 07:14	67-64-1	
Benzene	ND	ug/L	10.0	10		06/01/19 07:14	71-43-2	
Bromobenzene	ND	ug/L	10.0	10		06/01/19 07:14	108-86-1	
Bromochloromethane	ND	ug/L	10.0	10		06/01/19 07:14	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	10		06/01/19 07:14	75-27-4	
Bromoform	ND	ug/L	10.0	10		06/01/19 07:14	75-25-2	
Bromomethane	ND	ug/L	20.0	10		06/01/19 07:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	10		06/01/19 07:14	78-93-3	
Carbon tetrachloride	ND	ug/L	10.0	10		06/01/19 07:14	56-23-5	
Chlorobenzene	ND	ug/L	10.0	10		06/01/19 07:14	108-90-7	
Chloroethane	ND	ug/L	10.0	10		06/01/19 07:14	75-00-3	
Chloroform	ND	ug/L	50.0	10		06/01/19 07:14	67-66-3	
Chloromethane	ND	ug/L	10.0	10		06/01/19 07:14	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	10		06/01/19 07:14	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	10		06/01/19 07:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	50.0	10		06/01/19 07:14	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	10		06/01/19 07:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	10		06/01/19 07:14	106-93-4	
Dibromomethane	ND	ug/L	10.0	10		06/01/19 07:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	10		06/01/19 07:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	10		06/01/19 07:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	10		06/01/19 07:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	10.0	10		06/01/19 07:14	75-71-8	
1,1-Dichloroethane	**66.2**	ug/L	10.0	10		06/01/19 07:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	10		06/01/19 07:14	107-06-2	
1,1-Dichloroethene	**1190**	ug/L	10.0	10		06/01/19 07:14	75-35-4	M1
cis-1,2-Dichloroethene	ND	ug/L	10.0	10		06/01/19 07:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	10		06/01/19 07:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	10		06/01/19 07:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	10		06/01/19 07:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	10.0	10		06/01/19 07:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	10		06/01/19 07:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	10.0	10		06/01/19 07:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	10		06/01/19 07:14	10061-02-6	
Diisopropyl ether	ND	ug/L	10.0	10		06/01/19 07:14	108-20-3	
Ethylbenzene	ND	ug/L	10.0	10		06/01/19 07:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	10		06/01/19 07:14	87-68-3	
2-Hexanone	ND	ug/L	50.0	10		06/01/19 07:14	591-78-6	
p-Isopropyltoluene	ND	ug/L	10.0	10		06/01/19 07:14	99-87-6	
Methylene Chloride	ND	ug/L	50.0	10		06/01/19 07:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	10		06/01/19 07:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	10		06/01/19 07:14	1634-04-4	
Naphthalene	ND	ug/L	10.0	10		06/01/19 07:14	91-20-3	
Styrene	ND	ug/L	10.0	10		06/01/19 07:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	10		06/01/19 07:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		06/01/19 07:14	79-34-5	L2
Tetrachloroethene	ND	ug/L	10.0	10		06/01/19 07:14	127-18-4	

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-24D **Lab ID: 92430519003** Collected: 05/22/19 09:05 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	10.0	10		06/01/19 07:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	10		06/01/19 07:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	10		06/01/19 07:14	120-82-1	
1,1,1-Trichloroethane	**18.0**	ug/L	10.0	10		06/01/19 07:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	10		06/01/19 07:14	79-00-5	
Trichloroethene	ND	ug/L	10.0	10		06/01/19 07:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	10		06/01/19 07:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	10.0	10		06/01/19 07:14	96-18-4	
Vinyl acetate	ND	ug/L	20.0	10		06/01/19 07:14	108-05-4	L2
Vinyl chloride	ND	ug/L	10.0	10		06/01/19 07:14	75-01-4	
Xylene (Total)	ND	ug/L	10.0	10		06/01/19 07:14	1330-20-7	
m&p-Xylene	ND	ug/L	20.0	10		06/01/19 07:14	179601-23-1	
o-Xylene	ND	ug/L	10.0	10		06/01/19 07:14	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	10		06/01/19 07:14	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	10		06/01/19 07:14	17060-07-0	
Toluene-d8 (S)	102	%	70-130	10		06/01/19 07:14	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**359**	ug/L	10.0	5		05/29/19 14:07	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	50-150	5		05/29/19 14:07	17060-07-0	
Toluene-d8 (S)	104	%	50-150	5		05/29/19 14:07	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-31D **Lab ID: 92430519004** Collected: 05/22/19 10:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 16:45	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 16:45	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 16:45	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 16:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 16:45	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 16:45	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 16:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 16:45	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 16:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 16:45	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 16:45	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 16:45	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 16:45	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 16:45	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 16:45	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 16:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 16:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 16:45	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 16:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:45	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 16:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 16:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 16:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 16:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 16:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 16:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 16:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 16:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 16:45	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 16:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 16:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 16:45	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 16:45	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 16:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 16:45	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 16:45	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 16:45	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 16:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 16:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 16:45	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 16:45	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 16:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 16:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 16:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 16:45	127-18-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-31D **Lab ID: 92430519004** Collected: 05/22/19 10:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 16:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 16:45	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 16:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 16:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 16:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 16:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 16:45	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 16:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 16:45	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 16:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 16:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 16:45	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/30/19 16:45	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		05/30/19 16:45	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		05/30/19 16:45	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 14:26	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%	50-150	1		05/29/19 14:26	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		05/29/19 14:26	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-35D **Lab ID: 92430519005** Collected: 05/22/19 11:10 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 17:03	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 17:03	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 17:03	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 17:03	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 17:03	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 17:03	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 17:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 17:03	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 17:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 17:03	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 17:03	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 17:03	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 17:03	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:03	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:03	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 17:03	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 17:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 17:03	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 17:03	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:03	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 17:03	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:03	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:03	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:03	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:03	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:03	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 17:03	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 17:03	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 17:03	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 17:03	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 17:03	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 17:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 17:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 17:03	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 17:03	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 17:03	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:03	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:03	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 17:03	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-35D **Lab ID: 92430519005** Collected: 05/22/19 11:10 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 17:03	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:03	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:03	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 17:03	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 17:03	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 17:03	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 17:03	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 17:03	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 17:03	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 17:03	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 17:03	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		05/30/19 17:03	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		05/30/19 17:03	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 17:03	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 14:46	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	1		05/29/19 14:46	17060-07-0	
Toluene-d8 (S)	104	%	50-150	1		05/29/19 14:46	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-34D **Lab ID: 92430519006** Collected: 05/22/19 11:30 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 17:21	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 17:21	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 17:21	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 17:21	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 17:21	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 17:21	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 17:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 17:21	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 17:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 17:21	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 17:21	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 17:21	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 17:21	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:21	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 17:21	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 17:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 17:21	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 17:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 17:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:21	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 17:21	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 17:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 17:21	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 17:21	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 17:21	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 17:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 17:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 17:21	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 17:21	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 17:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 17:21	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-34D **Lab ID: 92430519006** Collected: 05/22/19 11:30 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 17:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 17:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 17:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 17:21	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 17:21	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 17:21	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 17:21	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 17:21	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 17:21	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		05/30/19 17:21	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		05/30/19 17:21	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 17:21	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 15:05	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	1		05/29/19 15:05	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		05/29/19 15:05	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-32D **Lab ID: 92430519007** Collected: 05/22/19 11:55 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 17:39	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 17:39	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 17:39	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 17:39	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 17:39	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 17:39	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 17:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 17:39	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 17:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 17:39	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 17:39	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 17:39	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 17:39	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:39	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 17:39	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 17:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 17:39	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 17:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:39	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 17:39	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:39	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:39	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:39	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:39	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:39	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 17:39	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 17:39	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 17:39	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 17:39	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 17:39	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 17:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 17:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 17:39	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 17:39	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 17:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 17:39	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-32D **Lab ID: 92430519007** Collected: 05/22/19 11:55 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 17:39	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:39	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:39	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 17:39	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 17:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 17:39	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 17:39	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 17:39	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 17:39	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 17:39	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 17:39	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		05/30/19 17:39	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		05/30/19 17:39	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		05/30/19 17:39	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 15:25	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	1		05/29/19 15:25	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		05/29/19 15:25	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-36D **Lab ID: 92430519008** Collected: 05/22/19 12:10 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 17:57	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 17:57	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 17:57	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 17:57	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 17:57	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 17:57	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 17:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 17:57	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 17:57	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 17:57	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 17:57	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 17:57	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 17:57	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:57	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 17:57	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 17:57	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 17:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 17:57	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 17:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:57	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 17:57	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 17:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 17:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:57	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:57	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 17:57	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:57	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 17:57	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 17:57	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 17:57	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 17:57	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 17:57	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 17:57	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 17:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 17:57	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 17:57	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 17:57	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 17:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 17:57	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 17:57	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-36D **Lab ID: 92430519008** Collected: 05/22/19 12:10 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 17:57	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:57	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 17:57	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 17:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 17:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 17:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 17:57	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 17:57	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 17:57	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 17:57	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 17:57	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 17:57	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/30/19 17:57	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		05/30/19 17:57	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 17:57	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 15:44	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%	50-150	1		05/29/19 15:44	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		05/29/19 15:44	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-33D-235 **Lab ID: 92430519009** Collected: 05/22/19 13:55 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 18:14	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 18:14	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 18:14	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 18:14	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 18:14	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 18:14	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 18:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 18:14	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 18:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 18:14	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 18:14	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 18:14	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 18:14	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 18:14	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 18:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 18:14	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 18:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 18:14	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 18:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 18:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 18:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 18:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 18:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 18:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 18:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:14	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 18:14	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 18:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 18:14	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 18:14	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 18:14	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 18:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 18:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 18:14	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 18:14	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 18:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 18:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 18:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 18:14	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-33D-235 **Lab ID: 92430519009** Collected: 05/22/19 13:55 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 18:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 18:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 18:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 18:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 18:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 18:14	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 18:14	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 18:14	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 18:14	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 18:14	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 18:14	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/30/19 18:14	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		05/30/19 18:14	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 18:14	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 16:04	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%	50-150	1		05/29/19 16:04	17060-07-0	
Toluene-d8 (S)	101	%	50-150	1		05/29/19 16:04	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-33D-295 **Lab ID: 92430519010** Collected: 05/22/19 13:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 18:32	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 18:32	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 18:32	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 18:32	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 18:32	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 18:32	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 18:32	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 18:32	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 18:32	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 18:32	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 18:32	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 18:32	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 18:32	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 18:32	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 18:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 18:32	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 18:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 18:32	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 18:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:32	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 18:32	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 18:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 18:32	107-06-2	
1,1-Dichloroethene	**4.5**	ug/L	1.0	1		05/30/19 18:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 18:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 18:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:32	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:32	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:32	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:32	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 18:32	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 18:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 18:32	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 18:32	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 18:32	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 18:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 18:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 18:32	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 18:32	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 18:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 18:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 18:32	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 18:32	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-33D-295 **Lab ID: 92430519010** Collected: 05/22/19 13:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 18:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 18:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 18:32	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 18:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 18:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 18:32	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 18:32	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 18:32	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 18:32	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 18:32	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 18:32	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		05/30/19 18:32	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		05/30/19 18:32	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		05/30/19 18:32	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**6.1**	ug/L	2.0	1		05/29/19 16:23	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	50-150	1		05/29/19 16:23	17060-07-0	
Toluene-d8 (S)	105	%	50-150	1		05/29/19 16:23	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-30D-273 **Lab ID: 92430519011** Collected: 05/22/19 14:20 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 18:50	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 18:50	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 18:50	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 18:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 18:50	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 18:50	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 18:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 18:50	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 18:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 18:50	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 18:50	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 18:50	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 18:50	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 18:50	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 18:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 18:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 18:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 18:50	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 18:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 18:50	75-71-8	
1,1-Dichloroethane	**1.1**	ug/L	1.0	1		05/30/19 18:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 18:50	107-06-2	
1,1-Dichloroethene	**44.2**	ug/L	1.0	1		05/30/19 18:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 18:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 18:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 18:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 18:50	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 18:50	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 18:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 18:50	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 18:50	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 18:50	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 18:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 18:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 18:50	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 18:50	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 18:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 18:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 18:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 18:50	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-30D-273 **Lab ID: 92430519011** Collected: 05/22/19 14:20 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 18:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 18:50	120-82-1	
1,1,1-Trichloroethane	**2.0**	ug/L	1.0	1		05/30/19 18:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 18:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 18:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 18:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 18:50	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 18:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 18:50	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 18:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 18:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 18:50	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		05/30/19 18:50	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		05/30/19 18:50	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 18:50	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**22.7**	ug/L	2.0	1		05/29/19 16:43	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	50-150	1		05/29/19 16:43	17060-07-0	
Toluene-d8 (S)	106	%	50-150	1		05/29/19 16:43	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-30D-413 **Lab ID: 92430519012** Collected: 05/22/19 14:25 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 19:08	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 19:08	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 19:08	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 19:08	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 19:08	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 19:08	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 19:08	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 19:08	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 19:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 19:08	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 19:08	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 19:08	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 19:08	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 19:08	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 19:08	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 19:08	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 19:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 19:08	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 19:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:08	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 19:08	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 19:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 19:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:08	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:08	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:08	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 19:08	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 19:08	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 19:08	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 19:08	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 19:08	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 19:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 19:08	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 19:08	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 19:08	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 19:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 19:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 19:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 19:08	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-30D-413 **Lab ID: 92430519012** Collected: 05/22/19 14:25 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 19:08	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:08	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 19:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 19:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 19:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 19:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 19:08	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 19:08	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 19:08	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 19:08	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 19:08	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 19:08	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		05/30/19 19:08	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		05/30/19 19:08	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 19:08	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/29/19 17:02	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	1		05/29/19 17:02	17060-07-0	
Toluene-d8 (S)	103	%	50-150	1		05/29/19 17:02	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-29D **Lab ID: 92430519013** Collected: 05/22/19 14:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 19:26	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 19:26	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 19:26	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 19:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 19:26	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 19:26	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 19:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 19:26	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 19:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 19:26	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 19:26	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 19:26	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 19:26	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 19:26	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 19:26	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 19:26	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 19:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 19:26	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 19:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:26	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 19:26	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 19:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 19:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:26	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:26	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:26	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:26	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:26	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 19:26	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 19:26	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 19:26	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 19:26	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 19:26	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 19:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 19:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 19:26	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 19:26	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 19:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 19:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 19:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 19:26	127-18-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-29D **Lab ID: 92430519013** Collected: 05/22/19 14:45 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 19:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:26	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 19:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 19:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 19:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 19:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 19:26	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 19:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 19:26	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 19:26	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 19:26	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 19:26	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		05/30/19 19:26	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		05/30/19 19:26	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		05/30/19 19:26	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/30/19 09:42	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		05/30/19 09:42	17060-07-0	
Toluene-d8 (S)	103	%	50-150	1		05/30/19 09:42	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-28D **Lab ID: 92430519014** Collected: 05/22/19 15:20 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 19:44	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 19:44	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 19:44	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 19:44	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 19:44	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 19:44	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 19:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 19:44	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 19:44	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 19:44	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 19:44	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 19:44	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 19:44	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 19:44	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 19:44	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 19:44	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 19:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 19:44	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 19:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:44	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 19:44	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 19:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 19:44	107-06-2	
1,1-Dichloroethene	**5.2**	ug/L	1.0	1		05/30/19 19:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 19:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:44	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:44	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 19:44	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:44	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 19:44	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 19:44	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 19:44	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 19:44	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 19:44	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 19:44	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 19:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 19:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 19:44	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 19:44	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 19:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 19:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 19:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 19:44	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-28D **Lab ID: 92430519014** Collected: 05/22/19 15:20 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 19:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 19:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 19:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 19:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 19:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 19:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 19:44	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 19:44	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 19:44	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 19:44	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 19:44	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 19:44	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		05/30/19 19:44	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		05/30/19 19:44	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		05/30/19 19:44	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**3.5**	ug/L	2.0	1		05/30/19 10:02	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	50-150	1		05/30/19 10:02	17060-07-0	
Toluene-d8 (S)	104	%	50-150	1		05/30/19 10:02	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: DUP 052219A **Lab ID: 92430519015** Collected: 05/22/19 09:00 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 20:02	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 20:02	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 20:02	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 20:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 20:02	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 20:02	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 20:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 20:02	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 20:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 20:02	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 20:02	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 20:02	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 20:02	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 20:02	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 20:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 20:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 20:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 20:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 20:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:02	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 20:02	75-71-8	
1,1-Dichloroethane	**10.7**	ug/L	1.0	1		05/30/19 20:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 20:02	107-06-2	
1,1-Dichloroethene	**45.7**	ug/L	1.0	1		05/30/19 20:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 20:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 20:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:02	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 20:02	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 20:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 20:02	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 20:02	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 20:02	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 20:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 20:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 20:02	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 20:02	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 20:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 20:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 20:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 20:02	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: DUP 052219A **Lab ID: 92430519015** Collected: 05/22/19 09:00 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 20:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:02	120-82-1	
1,1,1-Trichloroethane	**7.4**	ug/L	1.0	1		05/30/19 20:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 20:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 20:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 20:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 20:02	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 20:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 20:02	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 20:02	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 20:02	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 20:02	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		05/30/19 20:02	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		05/30/19 20:02	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		05/30/19 20:02	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**36.8**	ug/L	2.0	1		05/30/19 10:21	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	1		05/30/19 10:21	17060-07-0	
Toluene-d8 (S)	103	%	50-150	1		05/30/19 10:21	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-25D-130 **Lab ID: 92430519016** Collected: 05/22/19 15:55 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 20:20	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 20:20	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 20:20	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 20:20	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 20:20	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 20:20	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 20:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 20:20	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 20:20	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 20:20	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 20:20	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 20:20	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 20:20	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 20:20	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 20:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 20:20	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 20:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 20:20	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 20:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 20:20	75-71-8	
1,1-Dichloroethane	**3.7**	ug/L	1.0	1		05/30/19 20:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 20:20	107-06-2	
1,1-Dichloroethene	**96.2**	ug/L	1.0	1		05/30/19 20:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 20:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 20:20	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:20	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:20	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:20	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:20	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 20:20	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 20:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 20:20	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 20:20	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 20:20	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 20:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 20:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 20:20	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 20:20	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 20:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 20:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 20:20	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 20:20	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-25D-130 **Lab ID: 92430519016** Collected: 05/22/19 15:55 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 20:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:20	120-82-1	
1,1,1-Trichloroethane	**4.2**	ug/L	1.0	1		05/30/19 20:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 20:20	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 20:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 20:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 20:20	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 20:20	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 20:20	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 20:20	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 20:20	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 20:20	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/30/19 20:20	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	1		05/30/19 20:20	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		05/30/19 20:20	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**38.4**	ug/L	2.0	1		05/30/19 10:41	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	50-150	1		05/30/19 10:41	17060-07-0	
Toluene-d8 (S)	106	%	50-150	1		05/30/19 10:41	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-25D-190 **Lab ID: 92430519017** Collected: 05/22/19 15:40 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 20:37	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 20:37	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 20:37	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 20:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 20:37	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 20:37	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 20:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 20:37	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 20:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 20:37	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 20:37	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 20:37	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 20:37	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 20:37	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 20:37	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 20:37	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 20:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 20:37	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 20:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 20:37	75-71-8	
1,1-Dichloroethane	**11.8**	ug/L	1.0	1		05/30/19 20:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 20:37	107-06-2	
1,1-Dichloroethene	**51.7**	ug/L	1.0	1		05/30/19 20:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 20:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 20:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 20:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 20:37	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 20:37	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 20:37	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 20:37	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 20:37	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 20:37	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 20:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 20:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 20:37	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 20:37	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 20:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 20:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 20:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 20:37	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: MW-25D-190 **Lab ID: 92430519017** Collected: 05/22/19 15:40 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 20:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 20:37	120-82-1	
1,1,1-Trichloroethane	**8.5**	ug/L	1.0	1		05/30/19 20:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 20:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 20:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 20:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 20:37	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 20:37	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 20:37	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 20:37	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 20:37	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 20:37	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		05/30/19 20:37	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		05/30/19 20:37	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		05/30/19 20:37	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**36.7**	ug/L	2.0	1		05/30/19 11:00	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		05/30/19 11:00	17060-07-0	
Toluene-d8 (S)	106	%	50-150	1		05/30/19 11:00	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: Trip Blank **Lab ID: 92430519018** Collected: 05/22/19 00:00 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		05/30/19 15:52	67-64-1	
Benzene	ND	ug/L	1.0	1		05/30/19 15:52	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		05/30/19 15:52	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		05/30/19 15:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/19 15:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/19 15:52	75-25-2	
Bromomethane	ND	ug/L	2.0	1		05/30/19 15:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		05/30/19 15:52	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/19 15:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		05/30/19 15:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		05/30/19 15:52	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/30/19 15:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		05/30/19 15:52	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 15:52	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		05/30/19 15:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		05/30/19 15:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		05/30/19 15:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		05/30/19 15:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		05/30/19 15:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 15:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 15:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/19 15:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		05/30/19 15:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		05/30/19 15:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/19 15:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		05/30/19 15:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 15:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/19 15:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 15:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		05/30/19 15:52	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		05/30/19 15:52	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		05/30/19 15:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 15:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		05/30/19 15:52	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		05/30/19 15:52	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		05/30/19 15:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		05/30/19 15:52	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		05/30/19 15:52	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		05/30/19 15:52	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/30/19 15:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		05/30/19 15:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		05/30/19 15:52	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		05/30/19 15:52	91-20-3	
Styrene	ND	ug/L	1.0	1		05/30/19 15:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 15:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/19 15:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		05/30/19 15:52	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kopflex offsite
Pace Project No.: 92430519

Sample: Trip Blank **Lab ID: 92430519018** Collected: 05/22/19 00:00 Received: 05/24/19 09:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		05/30/19 15:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 15:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		05/30/19 15:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/19 15:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/19 15:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/19 15:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		05/30/19 15:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		05/30/19 15:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		05/30/19 15:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		05/30/19 15:52	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		05/30/19 15:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		05/30/19 15:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		05/30/19 15:52	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		05/30/19 15:52	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		05/30/19 15:52	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/30/19 15:52	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		05/30/19 11:20	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	50-150	1		05/30/19 11:20	17060-07-0	
Toluene-d8 (S)	104	%	50-150	1		05/30/19 11:20	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

QC Batch: 477901 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92430519002

METHOD BLANK: 2587378 Matrix: Water
Associated Lab Samples: 92430519002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/29/19 11:06	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/29/19 11:06	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/29/19 11:06	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/29/19 11:06	
1,1-Dichloroethane	ug/L	ND	1.0	05/29/19 11:06	
1,1-Dichloroethene	ug/L	ND	1.0	05/29/19 11:06	
1,1-Dichloropropene	ug/L	ND	1.0	05/29/19 11:06	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	05/29/19 11:06	
1,2,3-Trichloropropane	ug/L	ND	1.0	05/29/19 11:06	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	05/29/19 11:06	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	05/29/19 11:06	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/29/19 11:06	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/29/19 11:06	
1,2-Dichloroethane	ug/L	ND	1.0	05/29/19 11:06	
1,2-Dichloropropane	ug/L	ND	1.0	05/29/19 11:06	
1,3-Dichlorobenzene	ug/L	ND	1.0	05/29/19 11:06	
1,3-Dichloropropane	ug/L	ND	1.0	05/29/19 11:06	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/29/19 11:06	
2,2-Dichloropropane	ug/L	ND	1.0	05/29/19 11:06	
2-Butanone (MEK)	ug/L	ND	5.0	05/29/19 11:06	
2-Chlorotoluene	ug/L	ND	1.0	05/29/19 11:06	
2-Hexanone	ug/L	ND	5.0	05/29/19 11:06	
4-Chlorotoluene	ug/L	ND	1.0	05/29/19 11:06	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/29/19 11:06	
Acetone	ug/L	ND	25.0	05/29/19 11:06	
Benzene	ug/L	ND	1.0	05/29/19 11:06	
Bromobenzene	ug/L	ND	1.0	05/29/19 11:06	
Bromochloromethane	ug/L	ND	1.0	05/29/19 11:06	
Bromodichloromethane	ug/L	ND	1.0	05/29/19 11:06	
Bromoform	ug/L	ND	1.0	05/29/19 11:06	
Bromomethane	ug/L	ND	2.0	05/29/19 11:06	
Carbon tetrachloride	ug/L	ND	1.0	05/29/19 11:06	
Chlorobenzene	ug/L	ND	1.0	05/29/19 11:06	
Chloroethane	ug/L	ND	1.0	05/29/19 11:06	
Chloroform	ug/L	ND	5.0	05/29/19 11:06	
Chloromethane	ug/L	ND	1.0	05/29/19 11:06	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/29/19 11:06	
cis-1,3-Dichloropropene	ug/L	ND	1.0	05/29/19 11:06	
Dibromochloromethane	ug/L	ND	1.0	05/29/19 11:06	
Dibromomethane	ug/L	ND	1.0	05/29/19 11:06	
Dichlorodifluoromethane	ug/L	ND	1.0	05/29/19 11:06	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

METHOD BLANK: 2587378 Matrix: Water
Associated Lab Samples: 92430519002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	05/29/19 11:06	
Ethylbenzene	ug/L	ND	1.0	05/29/19 11:06	
Hexachloro-1,3-butadiene	ug/L	1.3	1.0	05/29/19 11:06	
m&p-Xylene	ug/L	ND	2.0	05/29/19 11:06	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/29/19 11:06	
Methylene Chloride	ug/L	ND	5.0	05/29/19 11:06	
Naphthalene	ug/L	ND	1.0	05/29/19 11:06	
o-Xylene	ug/L	ND	1.0	05/29/19 11:06	
p-Isopropyltoluene	ug/L	ND	1.0	05/29/19 11:06	
Styrene	ug/L	ND	1.0	05/29/19 11:06	
Tetrachloroethene	ug/L	ND	1.0	05/29/19 11:06	
Toluene	ug/L	ND	1.0	05/29/19 11:06	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/29/19 11:06	
trans-1,3-Dichloropropene	ug/L	ND	1.0	05/29/19 11:06	
Trichloroethene	ug/L	ND	1.0	05/29/19 11:06	
Trichlorofluoromethane	ug/L	ND	1.0	05/29/19 11:06	
Vinyl acetate	ug/L	ND	2.0	05/29/19 11:06	
Vinyl chloride	ug/L	ND	1.0	05/29/19 11:06	
Xylene (Total)	ug/L	ND	1.0	05/29/19 11:06	
1,2-Dichloroethane-d4 (S)	%	112	70-130	05/29/19 11:06	
4-Bromofluorobenzene (S)	%	94	70-130	05/29/19 11:06	
Toluene-d8 (S)	%	97	70-130	05/29/19 11:06	

LABORATORY CONTROL SAMPLE: 2587379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.5	107	70-130	
1,1,1-Trichloroethane	ug/L	50	48.7	97	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.5	91	70-130	
1,1,2-Trichloroethane	ug/L	50	46.2	92	70-130	
1,1-Dichloroethane	ug/L	50	44.6	89	70-130	
1,1-Dichloroethene	ug/L	50	48.1	96	70-130	
1,1-Dichloropropene	ug/L	50	41.2	82	70-130	
1,2,3-Trichlorobenzene	ug/L	50	54.5	109	70-130	
1,2,3-Trichloropropane	ug/L	50	41.0	82	70-130	
1,2,4-Trichlorobenzene	ug/L	50	55.0	110	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	52.5	105	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	49.2	98	70-130	
1,2-Dichlorobenzene	ug/L	50	49.5	99	70-130	
1,2-Dichloroethane	ug/L	50	47.9	96	70-130	
1,2-Dichloropropane	ug/L	50	43.5	87	70-130	
1,3-Dichlorobenzene	ug/L	50	48.8	98	70-130	
1,3-Dichloropropane	ug/L	50	47.1	94	70-131	
1,4-Dichlorobenzene	ug/L	50	48.3	97	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

LABORATORY CONTROL SAMPLE: 2587379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	52.9	106	69-130	
2-Butanone (MEK)	ug/L	100	100	100	64-135	
2-Chlorotoluene	ug/L	50	47.8	96	70-130	
2-Hexanone	ug/L	100	106	106	66-135	
4-Chlorotoluene	ug/L	50	48.1	96	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	70-130	
Acetone	ug/L	100	114	114	61-157	
Benzene	ug/L	50	44.1	88	70-130	
Bromobenzene	ug/L	50	48.8	98	70-130	
Bromochloromethane	ug/L	50	41.1	82	70-130	
Bromodichloromethane	ug/L	50	53.6	107	70-130	
Bromoform	ug/L	50	56.1	112	70-130	
Bromomethane	ug/L	50	49.9	100	38-130	
Carbon tetrachloride	ug/L	50	53.7	107	70-130	
Chlorobenzene	ug/L	50	46.8	94	70-130	
Chloroethane	ug/L	50	41.1	82	37-142	
Chloroform	ug/L	50	47.1	94	70-130	
Chloromethane	ug/L	50	48.1	96	48-130	
cis-1,2-Dichloroethene	ug/L	50	46.0	92	70-130	
cis-1,3-Dichloropropene	ug/L	50	49.0	98	70-130	
Dibromochloromethane	ug/L	50	54.5	109	70-130	
Dibromomethane	ug/L	50	51.3	103	70-130	
Dichlorodifluoromethane	ug/L	50	42.8	86	53-134	
Diisopropyl ether	ug/L	50	45.2	90	70-135	
Ethylbenzene	ug/L	50	47.0	94	70-130	
Hexachloro-1,3-butadiene	ug/L	50	53.6	107	68-132	
m&p-Xylene	ug/L	100	96.5	97	70-130	
Methyl-tert-butyl ether	ug/L	50	49.3	99	70-130	
Methylene Chloride	ug/L	50	43.5	87	67-132	
Naphthalene	ug/L	50	51.6	103	70-130	
o-Xylene	ug/L	50	47.1	94	70-130	
p-Isopropyltoluene	ug/L	50	50.2	100	70-130	
Styrene	ug/L	50	45.9	92	70-130	
Tetrachloroethene	ug/L	50	47.6	95	69-130	
Toluene	ug/L	50	44.1	88	70-130	
trans-1,2-Dichloroethene	ug/L	50	44.9	90	70-130	
trans-1,3-Dichloropropene	ug/L	50	52.2	104	70-130	
Trichloroethene	ug/L	50	47.8	96	70-130	
Trichlorofluoromethane	ug/L	50	48.5	97	63-130	
Vinyl acetate	ug/L	100	117	117	55-143	
Vinyl chloride	ug/L	50	44.2	88	70-131	
Xylene (Total)	ug/L	150	144	96	70-130	
1,2-Dichloroethane-d4 (S)	%			112	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2587380 2587381

Parameter	Units	92430523003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	18.7	20.6	94	103	73-134	10	30	
1,1,1-Trichloroethane	ug/L	9.4	20	20	28.4	30.0	95	103	82-143	5	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.7	19.3	89	97	70-136	9	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	18.6	19.5	93	97	70-135	5	30	
1,1-Dichloroethane	ug/L	2.1	20	20	21.8	23.0	98	105	70-139	5	30	
1,1-Dichloroethene	ug/L	2.7	20	20	24.4	24.3	108	108	70-154	1	30	
1,1-Dichloropropene	ug/L	ND	20	20	18.2	19.1	91	96	70-149	5	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	18.1	19.4	91	97	70-135	7	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	18.6	19.9	93	99	71-137	7	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	18.2	19.1	91	96	73-140	5	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	16.0	17.8	80	89	65-134	11	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	18.4	19.6	92	98	70-137	7	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	17.6	18.5	88	93	70-133	5	30	
1,2-Dichloroethane	ug/L	ND	20	20	18.9	20.9	94	104	70-137	10	30	
1,2-Dichloropropane	ug/L	ND	20	20	18.7	19.5	93	97	70-140	4	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	17.7	18.6	89	93	70-135	5	30	
1,3-Dichloropropane	ug/L	ND	20	20	18.8	19.8	94	99	70-143	5	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	17.6	18.9	88	95	70-133	7	30	
2,2-Dichloropropane	ug/L	ND	20	20	18.2	18.9	91	94	61-148	4	30	
2-Butanone (MEK)	ug/L	ND	40	40	38.1	40.7	95	102	60-139	7	30	
2-Chlorotoluene	ug/L	ND	20	20	17.6	18.1	88	90	70-144	3	30	
2-Hexanone	ug/L	ND	40	40	35.5	38.6	89	97	65-138	8	30	
4-Chlorotoluene	ug/L	ND	20	20	17.7	18.4	89	92	70-137	4	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	35.5	37.3	89	93	65-135	5	30	
Acetone	ug/L	ND	40	40	45.0	47.1	113	118	60-148	5	30	
Benzene	ug/L	ND	20	20	19.3	20.3	96	101	70-151	5	30	
Bromobenzene	ug/L	ND	20	20	18.6	19.1	93	95	70-136	3	30	
Bromochloromethane	ug/L	ND	20	20	22.3	22.5	112	112	70-141	1	30	
Bromodichloromethane	ug/L	ND	20	20	18.4	19.2	92	96	70-138	5	30	
Bromoform	ug/L	ND	20	20	16.6	18.5	83	93	63-130	11	30	
Bromomethane	ug/L	ND	20	20	10.5	11.3	53	56	15-152	7	30	
Carbon tetrachloride	ug/L	ND	20	20	18.5	19.3	93	97	70-143	4	30	
Chlorobenzene	ug/L	ND	20	20	18.3	19.2	92	96	70-138	5	30	
Chloroethane	ug/L	ND	20	20	19.6	20.8	98	104	52-163	6	30	
Chloroform	ug/L	ND	20	20	18.8	19.5	94	97	70-139	3	30	
Chloromethane	ug/L	ND	20	20	16.2	18.0	81	90	41-139	11	30	
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.2	20.4	96	102	70-141	6	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.4	19.2	92	96	70-137	4	30	
Dibromochloromethane	ug/L	ND	20	20	17.3	18.9	87	95	70-134	9	30	
Dibromomethane	ug/L	ND	20	20	18.6	19.4	93	97	70-138	4	30	
Dichlorodifluoromethane	ug/L	ND	20	20	18.9	19.9	94	100	47-155	5	30	
Diisopropyl ether	ug/L	ND	20	20	18.8	19.9	94	99	63-144	5	30	
Ethylbenzene	ug/L	ND	20	20	18.8	19.9	94	99	66-153	6	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	18.8	19.7	94	99	65-149	5	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2587380 2587381

Parameter	Units	92430523003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	ND	40	40	36.9	39.1	92	98	69-152	6	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	18.3	18.9	92	94	54-156	3	30	
Methylene Chloride	ug/L	ND	20	20	20.1	20.9	101	104	42-159	4	30	
Naphthalene	ug/L	ND	20	20	16.9	18.2	85	91	61-148	7	30	
o-Xylene	ug/L	ND	20	20	18.5	19.4	93	97	70-148	5	30	
p-Isopropyltoluene	ug/L	ND	20	20	18.4	19.4	92	97	70-146	5	30	
Styrene	ug/L	ND	20	20	18.1	19.3	91	96	70-135	6	30	
Tetrachloroethene	ug/L	ND	20	20	18.8	19.9	94	99	59-143	6	30	
Toluene	ug/L	ND	20	20	18.6	19.3	93	96	59-148	4	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.5	20.9	98	105	70-146	7	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.4	19.2	92	96	70-135	4	30	
Trichloroethene	ug/L	ND	20	20	18.5	19.8	93	99	70-147	7	30	
Trichlorofluoromethane	ug/L	ND	20	20	19.2	19.8	96	99	70-148	3	30	
Vinyl acetate	ug/L	ND	40	40	32.9	34.3	82	86	49-151	4	30	
Vinyl chloride	ug/L	ND	20	20	19.2	20.6	96	103	70-156	7	30	
Xylene (Total)	ug/L	ND	60	60	55.4	58.6	92	98	63-158	6	30	
1,2-Dichloroethane-d4 (S)	%						95	101	70-130			
4-Bromofluorobenzene (S)	%						99	101	70-130			
Toluene-d8 (S)	%						99	100	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

QC Batch: 478156 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92430519001, 92430519004, 92430519005, 92430519006, 92430519007, 92430519008, 92430519009, 92430519010, 92430519011, 92430519012, 92430519013, 92430519014, 92430519015, 92430519016, 92430519017, 92430519018

METHOD BLANK: 2588592 Matrix: Water
Associated Lab Samples: 92430519001, 92430519004, 92430519005, 92430519006, 92430519007, 92430519008, 92430519009, 92430519010, 92430519011, 92430519012, 92430519013, 92430519014, 92430519015, 92430519016, 92430519017, 92430519018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/30/19 15:34	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/30/19 15:34	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/30/19 15:34	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/30/19 15:34	
1,1-Dichloroethane	ug/L	ND	1.0	05/30/19 15:34	
1,1-Dichloroethene	ug/L	ND	1.0	05/30/19 15:34	
1,1-Dichloropropene	ug/L	ND	1.0	05/30/19 15:34	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	05/30/19 15:34	
1,2,3-Trichloropropane	ug/L	ND	1.0	05/30/19 15:34	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	05/30/19 15:34	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	05/30/19 15:34	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/30/19 15:34	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/30/19 15:34	
1,2-Dichloroethane	ug/L	ND	1.0	05/30/19 15:34	
1,2-Dichloropropane	ug/L	ND	1.0	05/30/19 15:34	
1,3-Dichlorobenzene	ug/L	ND	1.0	05/30/19 15:34	
1,3-Dichloropropane	ug/L	ND	1.0	05/30/19 15:34	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/30/19 15:34	
2,2-Dichloropropane	ug/L	ND	1.0	05/30/19 15:34	
2-Butanone (MEK)	ug/L	ND	5.0	05/30/19 15:34	
2-Chlorotoluene	ug/L	ND	1.0	05/30/19 15:34	
2-Hexanone	ug/L	ND	5.0	05/30/19 15:34	
4-Chlorotoluene	ug/L	ND	1.0	05/30/19 15:34	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/30/19 15:34	
Acetone	ug/L	ND	25.0	05/30/19 15:34	
Benzene	ug/L	ND	1.0	05/30/19 15:34	
Bromobenzene	ug/L	ND	1.0	05/30/19 15:34	
Bromochloromethane	ug/L	ND	1.0	05/30/19 15:34	
Bromodichloromethane	ug/L	ND	1.0	05/30/19 15:34	
Bromoform	ug/L	ND	1.0	05/30/19 15:34	
Bromomethane	ug/L	ND	2.0	05/30/19 15:34	
Carbon tetrachloride	ug/L	ND	1.0	05/30/19 15:34	
Chlorobenzene	ug/L	ND	1.0	05/30/19 15:34	
Chloroethane	ug/L	ND	1.0	05/30/19 15:34	
Chloroform	ug/L	ND	5.0	05/30/19 15:34	
Chloromethane	ug/L	ND	1.0	05/30/19 15:34	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/30/19 15:34	
cis-1,3-Dichloropropene	ug/L	ND	1.0	05/30/19 15:34	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

METHOD BLANK: 2588592 Matrix: Water

Associated Lab Samples: 92430519001, 92430519004, 92430519005, 92430519006, 92430519007, 92430519008, 92430519009, 92430519010, 92430519011, 92430519012, 92430519013, 92430519014, 92430519015, 92430519016, 92430519017, 92430519018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	05/30/19 15:34	
Dibromomethane	ug/L	ND	1.0	05/30/19 15:34	
Dichlorodifluoromethane	ug/L	ND	1.0	05/30/19 15:34	
Diisopropyl ether	ug/L	ND	1.0	05/30/19 15:34	
Ethylbenzene	ug/L	ND	1.0	05/30/19 15:34	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	05/30/19 15:34	
m&p-Xylene	ug/L	ND	2.0	05/30/19 15:34	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/30/19 15:34	
Methylene Chloride	ug/L	ND	5.0	05/30/19 15:34	
Naphthalene	ug/L	ND	1.0	05/30/19 15:34	
o-Xylene	ug/L	ND	1.0	05/30/19 15:34	
p-Isopropyltoluene	ug/L	ND	1.0	05/30/19 15:34	
Styrene	ug/L	ND	1.0	05/30/19 15:34	
Tetrachloroethene	ug/L	ND	1.0	05/30/19 15:34	
Toluene	ug/L	ND	1.0	05/30/19 15:34	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/30/19 15:34	
trans-1,3-Dichloropropene	ug/L	ND	1.0	05/30/19 15:34	
Trichloroethene	ug/L	ND	1.0	05/30/19 15:34	
Trichlorofluoromethane	ug/L	ND	1.0	05/30/19 15:34	
Vinyl acetate	ug/L	ND	2.0	05/30/19 15:34	
Vinyl chloride	ug/L	ND	1.0	05/30/19 15:34	
Xylene (Total)	ug/L	ND	1.0	05/30/19 15:34	
1,2-Dichloroethane-d4 (S)	%	100	70-130	05/30/19 15:34	
4-Bromofluorobenzene (S)	%	101	70-130	05/30/19 15:34	
Toluene-d8 (S)	%	101	70-130	05/30/19 15:34	

LABORATORY CONTROL SAMPLE: 2588593

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.8	94	70-130	
1,1,1-Trichloroethane	ug/L	50	44.6	89	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	43.4	87	70-130	
1,1,2-Trichloroethane	ug/L	50	46.4	93	70-130	
1,1-Dichloroethane	ug/L	50	44.6	89	70-130	
1,1-Dichloroethene	ug/L	50	49.0	98	70-130	
1,1-Dichloropropene	ug/L	50	41.7	83	70-130	
1,2,3-Trichlorobenzene	ug/L	50	46.1	92	70-130	
1,2,3-Trichloropropane	ug/L	50	44.6	89	70-130	
1,2,4-Trichlorobenzene	ug/L	50	45.9	92	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	44.9	90	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	44.8	90	70-130	
1,2-Dichlorobenzene	ug/L	50	43.0	86	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

LABORATORY CONTROL SAMPLE: 2588593

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	46.3	93	70-130	
1,2-Dichloropropane	ug/L	50	45.1	90	70-130	
1,3-Dichlorobenzene	ug/L	50	42.8	86	70-130	
1,3-Dichloropropane	ug/L	50	44.3	89	70-131	
1,4-Dichlorobenzene	ug/L	50	42.7	85	70-130	
2,2-Dichloropropane	ug/L	50	43.9	88	69-130	
2-Butanone (MEK)	ug/L	100	86.3	86	64-135	
2-Chlorotoluene	ug/L	50	42.7	85	70-130	
2-Hexanone	ug/L	100	88.1	88	66-135	
4-Chlorotoluene	ug/L	50	42.6	85	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	89.8	90	70-130	
Acetone	ug/L	100	93.3	93	61-157	
Benzene	ug/L	50	45.3	91	70-130	
Bromobenzene	ug/L	50	45.2	90	70-130	
Bromochloromethane	ug/L	50	53.0	106	70-130	
Bromodichloromethane	ug/L	50	45.8	92	70-130	
Bromoform	ug/L	50	46.0	92	70-130	
Bromomethane	ug/L	50	43.4	87	38-130	
Carbon tetrachloride	ug/L	50	43.6	87	70-130	
Chlorobenzene	ug/L	50	43.3	87	70-130	
Chloroethane	ug/L	50	41.8	84	37-142	
Chloroform	ug/L	50	42.4	85	70-130	
Chloromethane	ug/L	50	42.5	85	48-130	
cis-1,2-Dichloroethene	ug/L	50	43.6	87	70-130	
cis-1,3-Dichloropropene	ug/L	50	46.0	92	70-130	
Dibromochloromethane	ug/L	50	45.2	90	70-130	
Dibromomethane	ug/L	50	43.8	88	70-130	
Dichlorodifluoromethane	ug/L	50	42.9	86	53-134	
Diisopropyl ether	ug/L	50	45.5	91	70-135	
Ethylbenzene	ug/L	50	43.5	87	70-130	
Hexachloro-1,3-butadiene	ug/L	50	48.2	96	68-132	
m&p-Xylene	ug/L	100	86.7	87	70-130	
Methyl-tert-butyl ether	ug/L	50	44.1	88	70-130	
Methylene Chloride	ug/L	50	46.8	94	67-132	
Naphthalene	ug/L	50	45.1	90	70-130	
o-Xylene	ug/L	50	44.1	88	70-130	
p-Isopropyltoluene	ug/L	50	44.1	88	70-130	
Styrene	ug/L	50	43.8	88	70-130	
Tetrachloroethene	ug/L	50	43.6	87	69-130	
Toluene	ug/L	50	43.3	87	70-130	
trans-1,2-Dichloroethene	ug/L	50	45.8	92	70-130	
trans-1,3-Dichloropropene	ug/L	50	46.5	93	70-130	
Trichloroethene	ug/L	50	44.0	88	70-130	
Trichlorofluoromethane	ug/L	50	40.6	81	63-130	
Vinyl acetate	ug/L	100	94.4	94	55-143	
Vinyl chloride	ug/L	50	45.4	91	70-131	
Xylene (Total)	ug/L	150	131	87	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

LABORATORY CONTROL SAMPLE: 2588593

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2588594 2588595

Parameter	Units	92430507013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	500	500	490	495	98	99	73-134	1	30	
1,1,1-Trichloroethane	ug/L	ND	500	500	491	511	98	102	82-143	4	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	500	500	469	455	94	91	70-136	3	30	
1,1,2-Trichloroethane	ug/L	ND	500	500	479	478	96	96	70-135	0	30	
1,1-Dichloroethane	ug/L	ND	500	500	518	508	104	102	70-139	2	30	
1,1-Dichloroethene	ug/L	ND	500	500	559	525	112	105	70-154	6	30	
1,1-Dichloropropene	ug/L	ND	500	500	490	489	98	98	70-149	0	30	
1,2,3-Trichlorobenzene	ug/L	ND	500	500	472	450	94	90	70-135	5	30	
1,2,3-Trichloropropane	ug/L	ND	500	500	485	476	97	95	71-137	2	30	
1,2,4-Trichlorobenzene	ug/L	ND	500	500	483	460	97	92	73-140	5	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	500	500	461	447	92	89	65-134	3	30	
1,2-Dibromoethane (EDB)	ug/L	ND	500	500	483	468	97	94	70-137	3	30	
1,2-Dichlorobenzene	ug/L	ND	500	500	468	448	94	90	70-133	4	30	
1,2-Dichloroethane	ug/L	ND	500	500	497	513	99	103	70-137	3	30	
1,2-Dichloropropane	ug/L	ND	500	500	499	466	100	93	70-140	7	30	
1,3-Dichlorobenzene	ug/L	ND	500	500	476	451	95	90	70-135	5	30	
1,3-Dichloropropane	ug/L	ND	500	500	484	471	97	94	70-143	3	30	
1,4-Dichlorobenzene	ug/L	ND	500	500	469	443	94	89	70-133	6	30	
2,2-Dichloropropane	ug/L	ND	500	500	450	459	90	92	61-148	2	30	
2-Butanone (MEK)	ug/L	ND	1000	1000	953	968	95	97	60-139	2	30	
2-Chlorotoluene	ug/L	ND	500	500	519	501	104	100	70-144	4	30	
2-Hexanone	ug/L	ND	1000	1000	960	917	96	92	65-138	5	30	
4-Chlorotoluene	ug/L	ND	500	500	478	469	96	94	70-137	2	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	1000	1000	943	919	94	92	65-135	3	30	
Acetone	ug/L	ND	1000	1000	1020	1000	102	100	60-148	2	30	
Benzene	ug/L	2750	500	500	3400	3310	130	113	70-151	2	30	
Bromobenzene	ug/L	ND	500	500	490	474	98	95	70-136	3	30	
Bromochloromethane	ug/L	ND	500	500	486	494	97	99	70-141	2	30	
Bromodichloromethane	ug/L	ND	500	500	501	475	100	95	70-138	5	30	
Bromoform	ug/L	ND	500	500	444	433	89	87	63-130	2	30	
Bromomethane	ug/L	ND	500	500	392	417	78	83	15-152	6	30	
Carbon tetrachloride	ug/L	ND	500	500	503	480	101	96	70-143	5	30	
Chlorobenzene	ug/L	ND	500	500	490	478	96	93	70-138	3	30	
Chloroethane	ug/L	ND	500	500	521	516	104	103	52-163	1	30	
Chloroform	ug/L	ND	500	500	502	527	95	100	70-139	5	30	
Chloromethane	ug/L	ND	500	500	507	518	101	104	41-139	2	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2588594 2588595

Parameter	Units	92430507013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
cis-1,2-Dichloroethene	ug/L	ND	500	500	512	502	102	100	70-141	2	30	
cis-1,3-Dichloropropene	ug/L	ND	500	500	484	465	97	93	70-137	4	30	
Dibromochloromethane	ug/L	ND	500	500	468	453	94	91	70-134	3	30	
Dibromomethane	ug/L	ND	500	500	477	463	95	93	70-138	3	30	
Dichlorodifluoromethane	ug/L	ND	500	500	516	507	103	101	47-155	2	30	
Diisopropyl ether	ug/L	ND	500	500	469	497	94	99	63-144	6	30	
Ethylbenzene	ug/L	174	500	500	690	676	103	100	66-153	2	30	
Hexachloro-1,3-butadiene	ug/L	ND	500	500	485	471	97	94	65-149	3	30	
m&p-Xylene	ug/L	400	1000	1000	1420	1390	101	99	69-152	2	30	
Methyl-tert-butyl ether	ug/L	259	500	500	752	758	99	100	54-156	1	30	
Methylene Chloride	ug/L	ND	500	500	517	514	103	103	42-159	0	30	
Naphthalene	ug/L	274	500	500	779	749	101	95	61-148	4	30	
o-Xylene	ug/L	371	500	500	887	868	103	99	70-148	2	30	
p-Isopropyltoluene	ug/L	ND	500	500	507	502	97	96	70-146	1	30	
Styrene	ug/L	ND	500	500	490	475	98	95	70-135	3	30	
Tetrachloroethene	ug/L	ND	500	500	500	482	100	96	59-143	4	30	
Toluene	ug/L	189	500	500	679	665	98	95	59-148	2	30	
trans-1,2-Dichloroethene	ug/L	ND	500	500	534	504	107	101	70-146	6	30	
trans-1,3-Dichloropropene	ug/L	ND	500	500	479	474	96	95	70-135	1	30	
Trichloroethene	ug/L	ND	500	500	510	485	102	97	70-147	5	30	
Trichlorofluoromethane	ug/L	ND	500	500	489	526	98	105	70-148	7	30	
Vinyl acetate	ug/L	ND	1000	1000	998	1000	100	100	49-151	1	30	
Vinyl chloride	ug/L	ND	500	500	504	525	101	105	70-156	4	30	
Xylene (Total)	ug/L	771	1500	1500	2300	2250	102	99	63-158	2	30	
1,2-Dichloroethane-d4 (S)	%						95	97	70-130			
4-Bromofluorobenzene (S)	%						100	100	70-130			
Toluene-d8 (S)	%						100	99	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

QC Batch: 478486 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92430519003

METHOD BLANK: 2590192 Matrix: Water
Associated Lab Samples: 92430519003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	05/31/19 23:30	
1,1,1-Trichloroethane	ug/L	ND	1.0	05/31/19 23:30	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/31/19 23:30	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/31/19 23:30	
1,1-Dichloroethane	ug/L	ND	1.0	05/31/19 23:30	
1,1-Dichloroethene	ug/L	ND	1.0	05/31/19 23:30	
1,1-Dichloropropene	ug/L	ND	1.0	05/31/19 23:30	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	05/31/19 23:30	
1,2,3-Trichloropropane	ug/L	ND	1.0	05/31/19 23:30	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	05/31/19 23:30	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	05/31/19 23:30	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	05/31/19 23:30	
1,2-Dichlorobenzene	ug/L	ND	1.0	05/31/19 23:30	
1,2-Dichloroethane	ug/L	ND	1.0	05/31/19 23:30	
1,2-Dichloropropane	ug/L	ND	1.0	05/31/19 23:30	
1,3-Dichlorobenzene	ug/L	ND	1.0	05/31/19 23:30	
1,3-Dichloropropane	ug/L	ND	1.0	05/31/19 23:30	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/31/19 23:30	
2,2-Dichloropropane	ug/L	ND	1.0	05/31/19 23:30	
2-Butanone (MEK)	ug/L	ND	5.0	05/31/19 23:30	
2-Chlorotoluene	ug/L	ND	1.0	05/31/19 23:30	
2-Hexanone	ug/L	ND	5.0	05/31/19 23:30	
4-Chlorotoluene	ug/L	ND	1.0	05/31/19 23:30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	05/31/19 23:30	
Acetone	ug/L	ND	25.0	05/31/19 23:30	
Benzene	ug/L	ND	1.0	05/31/19 23:30	
Bromobenzene	ug/L	ND	1.0	05/31/19 23:30	
Bromochloromethane	ug/L	ND	1.0	05/31/19 23:30	
Bromodichloromethane	ug/L	ND	1.0	05/31/19 23:30	
Bromoform	ug/L	ND	1.0	05/31/19 23:30	
Bromomethane	ug/L	ND	2.0	05/31/19 23:30	
Carbon tetrachloride	ug/L	ND	1.0	05/31/19 23:30	
Chlorobenzene	ug/L	ND	1.0	05/31/19 23:30	
Chloroethane	ug/L	ND	1.0	05/31/19 23:30	
Chloroform	ug/L	ND	5.0	05/31/19 23:30	
Chloromethane	ug/L	ND	1.0	05/31/19 23:30	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/31/19 23:30	
cis-1,3-Dichloropropene	ug/L	ND	1.0	05/31/19 23:30	
Dibromochloromethane	ug/L	ND	1.0	05/31/19 23:30	
Dibromomethane	ug/L	ND	1.0	05/31/19 23:30	
Dichlorodifluoromethane	ug/L	ND	1.0	05/31/19 23:30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

METHOD BLANK: 2590192 Matrix: Water
Associated Lab Samples: 92430519003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	05/31/19 23:30	
Ethylbenzene	ug/L	ND	1.0	05/31/19 23:30	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	05/31/19 23:30	
m&p-Xylene	ug/L	ND	2.0	05/31/19 23:30	
Methyl-tert-butyl ether	ug/L	ND	1.0	05/31/19 23:30	
Methylene Chloride	ug/L	ND	5.0	05/31/19 23:30	
Naphthalene	ug/L	ND	1.0	05/31/19 23:30	
o-Xylene	ug/L	ND	1.0	05/31/19 23:30	
p-Isopropyltoluene	ug/L	ND	1.0	05/31/19 23:30	
Styrene	ug/L	ND	1.0	05/31/19 23:30	
Tetrachloroethene	ug/L	ND	1.0	05/31/19 23:30	
Toluene	ug/L	ND	1.0	05/31/19 23:30	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/31/19 23:30	
trans-1,3-Dichloropropene	ug/L	ND	1.0	05/31/19 23:30	
Trichloroethene	ug/L	ND	1.0	05/31/19 23:30	
Trichlorofluoromethane	ug/L	ND	1.0	05/31/19 23:30	
Vinyl acetate	ug/L	ND	2.0	05/31/19 23:30	
Vinyl chloride	ug/L	ND	1.0	05/31/19 23:30	
Xylene (Total)	ug/L	ND	1.0	05/31/19 23:30	
1,2-Dichloroethane-d4 (S)	%	101	70-130	05/31/19 23:30	
4-Bromofluorobenzene (S)	%	100	70-130	05/31/19 23:30	
Toluene-d8 (S)	%	100	70-130	05/31/19 23:30	

LABORATORY CONTROL SAMPLE: 2590193

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.2	102	70-130	
1,1,1-Trichloroethane	ug/L	50	47.6	95	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	31.0	62	70-130	L2
1,1,2-Trichloroethane	ug/L	50	49.9	100	70-130	
1,1-Dichloroethane	ug/L	50	49.1	98	70-130	
1,1-Dichloroethene	ug/L	50	49.1	98	70-130	
1,1-Dichloropropene	ug/L	50	46.3	93	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.7	101	70-130	
1,2,3-Trichloropropane	ug/L	50	48.9	98	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.0	98	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.5	97	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	49.2	98	70-130	
1,2-Dichlorobenzene	ug/L	50	46.8	94	70-130	
1,2-Dichloroethane	ug/L	50	51.6	103	70-130	
1,2-Dichloropropane	ug/L	50	47.6	95	70-130	
1,3-Dichlorobenzene	ug/L	50	46.5	93	70-130	
1,3-Dichloropropane	ug/L	50	48.7	97	70-131	
1,4-Dichlorobenzene	ug/L	50	46.1	92	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

LABORATORY CONTROL SAMPLE: 2590193

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	48.6	97	69-130	
2-Butanone (MEK)	ug/L	100	106	106	64-135	
2-Chlorotoluene	ug/L	50	45.2	90	70-130	
2-Hexanone	ug/L	100	101	101	66-135	
4-Chlorotoluene	ug/L	50	45.7	91	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.9	99	70-130	
Acetone	ug/L	100	119	119	61-157	
Benzene	ug/L	50	47.6	95	70-130	
Bromobenzene	ug/L	50	48.5	97	70-130	
Bromochloromethane	ug/L	50	59.2	118	70-130	
Bromodichloromethane	ug/L	50	48.3	97	70-130	
Bromoform	ug/L	50	47.8	96	70-130	
Bromomethane	ug/L	50	37.1	74	38-130	
Carbon tetrachloride	ug/L	50	45.8	92	70-130	
Chlorobenzene	ug/L	50	47.0	94	70-130	
Chloroethane	ug/L	50	44.6	89	37-142	
Chloroform	ug/L	50	48.6	97	70-130	
Chloromethane	ug/L	50	40.7	81	48-130	
cis-1,2-Dichloroethene	ug/L	50	49.3	99	70-130	
cis-1,3-Dichloropropene	ug/L	50	49.0	98	70-130	
Dibromochloromethane	ug/L	50	48.5	97	70-130	
Dibromomethane	ug/L	50	49.1	98	70-130	
Dichlorodifluoromethane	ug/L	50	42.7	85	53-134	
Diisopropyl ether	ug/L	50	50.0	100	70-135	
Ethylbenzene	ug/L	50	47.3	95	70-130	
Hexachloro-1,3-butadiene	ug/L	50	50.2	100	68-132	
m&p-Xylene	ug/L	100	94.0	94	70-130	
Methyl-tert-butyl ether	ug/L	50	49.1	98	70-130	
Methylene Chloride	ug/L	50	52.4	105	67-132	
Naphthalene	ug/L	50	50.2	100	70-130	
o-Xylene	ug/L	50	47.0	94	70-130	
p-Isopropyltoluene	ug/L	50	47.5	95	70-130	
Styrene	ug/L	50	48.1	96	70-130	
Tetrachloroethene	ug/L	50	47.8	96	69-130	
Toluene	ug/L	50	46.6	93	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.8	100	70-130	
trans-1,3-Dichloropropene	ug/L	50	50.1	100	70-130	
Trichloroethene	ug/L	50	62.1	124	70-130	
Trichlorofluoromethane	ug/L	50	42.5	85	63-130	
Vinyl acetate	ug/L	100	12.6	13	55-143	L2
Vinyl chloride	ug/L	50	47.2	94	70-131	
Xylene (Total)	ug/L	150	141	94	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			99	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2590194 2590195

Parameter	Units	92430519003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	200	200	192	181	96	91	73-134	6	30	
1,1,1-Trichloroethane	ug/L	18.0	200	200	210	212	96	97	82-143	1	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	200	200	181	168	91	84	70-136	8	30	
1,1,2-Trichloroethane	ug/L	ND	200	200	188	185	94	92	70-135	2	30	
1,1-Dichloroethane	ug/L	66.2	200	200	257	260	95	97	70-139	1	30	
1,1-Dichloroethene	ug/L	1190	200	200	1330	1440	68	125	70-154	8	30	M1
1,1-Dichloropropene	ug/L	ND	200	200	184	181	92	91	70-149	2	30	
1,2,3-Trichlorobenzene	ug/L	ND	200	200	181	174	91	87	70-135	4	30	
1,2,3-Trichloropropane	ug/L	ND	200	200	181	183	90	91	71-137	1	30	
1,2,4-Trichlorobenzene	ug/L	ND	200	200	176	171	88	86	73-140	3	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	200	200	168	164	84	82	65-134	2	30	
1,2-Dibromoethane (EDB)	ug/L	ND	200	200	187	175	93	87	70-137	7	30	
1,2-Dichlorobenzene	ug/L	ND	200	200	176	172	88	86	70-133	2	30	
1,2-Dichloroethane	ug/L	ND	200	200	210	205	102	100	70-137	2	30	
1,2-Dichloropropane	ug/L	ND	200	200	184	181	92	90	70-140	2	30	
1,3-Dichlorobenzene	ug/L	ND	200	200	176	174	88	87	70-135	1	30	
1,3-Dichloropropane	ug/L	ND	200	200	185	180	93	90	70-143	3	30	
1,4-Dichlorobenzene	ug/L	ND	200	200	173	172	86	86	70-133	1	30	
2,2-Dichloropropane	ug/L	ND	200	200	164	158	82	79	61-148	4	30	
2-Butanone (MEK)	ug/L	ND	400	400	378	348	94	87	60-139	8	30	
2-Chlorotoluene	ug/L	ND	200	200	179	173	90	86	70-144	4	30	
2-Hexanone	ug/L	ND	400	400	352	337	88	84	65-138	5	30	
4-Chlorotoluene	ug/L	ND	200	200	174	173	87	87	70-137	1	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	400	400	360	337	90	84	65-135	6	30	
Acetone	ug/L	ND	400	400	425	399	106	100	60-148	6	30	
Benzene	ug/L	ND	200	200	194	188	97	94	70-151	3	30	
Bromobenzene	ug/L	ND	200	200	181	186	91	93	70-136	3	30	
Bromochloromethane	ug/L	ND	200	200	218	210	109	105	70-141	4	30	
Bromodichloromethane	ug/L	ND	200	200	179	175	90	88	70-138	2	30	
Bromoform	ug/L	ND	200	200	159	156	79	78	63-130	2	30	
Bromomethane	ug/L	ND	200	200	128	126	64	63	15-152	2	30	
Carbon tetrachloride	ug/L	ND	200	200	189	186	94	93	70-143	2	30	
Chlorobenzene	ug/L	ND	200	200	181	176	91	88	70-138	3	30	
Chloroethane	ug/L	ND	200	200	190	197	95	98	52-163	3	30	
Chloroform	ug/L	ND	200	200	192	180	96	90	70-139	7	30	
Chloromethane	ug/L	ND	200	200	154	159	77	80	41-139	3	30	
cis-1,2-Dichloroethene	ug/L	ND	200	200	196	191	96	93	70-141	3	30	
cis-1,3-Dichloropropene	ug/L	ND	200	200	175	170	88	85	70-137	3	30	
Dibromochloromethane	ug/L	ND	200	200	166	166	83	83	70-134	0	30	
Dibromomethane	ug/L	ND	200	200	184	176	92	88	70-138	5	30	
Dichlorodifluoromethane	ug/L	ND	200	200	182	180	91	90	47-155	1	30	
Diisopropyl ether	ug/L	ND	200	200	187	181	94	91	63-144	3	30	
Ethylbenzene	ug/L	ND	200	200	187	181	93	91	66-153	3	30	
Hexachloro-1,3-butadiene	ug/L	ND	200	200	175	180	88	90	65-149	2	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2590194 2590195

Parameter	Units	92430519003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	ND	400	400	368	359	92	90	69-152	2	30	
Methyl-tert-butyl ether	ug/L	ND	200	200	184	179	92	89	54-156	3	30	
Methylene Chloride	ug/L	ND	200	200	205	197	103	98	42-159	4	30	
Naphthalene	ug/L	ND	200	200	167	165	84	82	61-148	2	30	
o-Xylene	ug/L	ND	200	200	188	181	94	91	70-148	4	30	
p-Isopropyltoluene	ug/L	ND	200	200	180	173	90	87	70-146	4	30	
Styrene	ug/L	ND	200	200	180	173	90	86	70-135	4	30	
Tetrachloroethene	ug/L	ND	200	200	183	181	92	91	59-143	1	30	
Toluene	ug/L	ND	200	200	187	181	94	90	59-148	3	30	
trans-1,2-Dichloroethene	ug/L	ND	200	200	200	196	100	98	70-146	2	30	
trans-1,3-Dichloropropene	ug/L	ND	200	200	181	171	91	86	70-135	6	30	
Trichloroethene	ug/L	ND	200	200	198	199	95	95	70-147	1	30	
Trichlorofluoromethane	ug/L	ND	200	200	190	194	95	97	70-148	2	30	
Vinyl acetate	ug/L	ND	400	400	375	360	94	90	49-151	4	30	
Vinyl chloride	ug/L	ND	200	200	191	191	95	96	70-156	0	30	
Xylene (Total)	ug/L	ND	600	600	556	540	93	90	63-158	3	30	
1,2-Dichloroethane-d4 (S)	%						102	98	70-130			
4-Bromofluorobenzene (S)	%						99	99	70-130			
Toluene-d8 (S)	%						99	99	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

QC Batch: 477873 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92430519001, 92430519002, 92430519003, 92430519004, 92430519005, 92430519006, 92430519007, 92430519008, 92430519009, 92430519010, 92430519011, 92430519012

METHOD BLANK: 2587225 Matrix: Water
Associated Lab Samples: 92430519001, 92430519002, 92430519003, 92430519004, 92430519005, 92430519006, 92430519007, 92430519008, 92430519009, 92430519010, 92430519011, 92430519012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	05/29/19 10:33	
1,2-Dichloroethane-d4 (S)	%	97	50-150	05/29/19 10:33	
Toluene-d8 (S)	%	104	50-150	05/29/19 10:33	

LABORATORY CONTROL SAMPLE: 2587226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	19.4	97	70-130	
1,2-Dichloroethane-d4 (S)	%			98	50-150	
Toluene-d8 (S)	%			103	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2587227 2587228

Parameter	Units	92430510015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	111	40	40	146	151	87	99	50-150	3	30	
1,2-Dichloroethane-d4 (S)	%						100	101	50-150		30	
Toluene-d8 (S)	%						104	104	50-150		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kopflex offsite
Pace Project No.: 92430519

QC Batch: 478121 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92430519013, 92430519014, 92430519015, 92430519016, 92430519017, 92430519018

METHOD BLANK: 2588461 Matrix: Water
Associated Lab Samples: 92430519013, 92430519014, 92430519015, 92430519016, 92430519017, 92430519018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	05/30/19 09:03	
1,2-Dichloroethane-d4 (S)	%	98	50-150	05/30/19 09:03	
Toluene-d8 (S)	%	103	50-150	05/30/19 09:03	

LABORATORY CONTROL SAMPLE: 2588462

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	18.9	94	70-130	
1,2-Dichloroethane-d4 (S)	%			96	50-150	
Toluene-d8 (S)	%			101	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2588463 2588464

Parameter	Units	92430519013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	19.3	20.0	97	100	50-150	4	30	
1,2-Dichloroethane-d4 (S)	%						102	102	50-150		30	
Toluene-d8 (S)	%						104	104	50-150		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Kopflex offsite
Pace Project No.: 92430519

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Kopflex offsite
Pace Project No.: 92430519

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92430519001	**MW-46D**	EPA 8260B	478156		
92430519002	**MW-45**	EPA 8260B	477901		
92430519003	**MW-24D**	EPA 8260B	478486		
92430519004	**MW-31D**	EPA 8260B	478156		
92430519005	**MW-35D**	EPA 8260B	478156		
92430519006	**MW-34D**	EPA 8260B	478156		
92430519007	**MW-32D**	EPA 8260B	478156		
92430519008	**MW-36D**	EPA 8260B	478156		
92430519009	**MW-33D-235**	EPA 8260B	478156		
92430519010	**MW-33D-295**	EPA 8260B	478156		
92430519011	**MW-30D-273**	EPA 8260B	478156		
92430519012	**MW-30D-413**	EPA 8260B	478156		
92430519013	**MW-29D**	EPA 8260B	478156		
92430519014	**MW-28D**	EPA 8260B	478156		
92430519015	**DUP 052219A**	EPA 8260B	478156		
92430519016	**MW-25D-130**	EPA 8260B	478156		
92430519017	**MW-25D-190**	EPA 8260B	478156		
92430519018	**Trip Blank**	EPA 8260B	478156		
92430519001	**MW-46D**	EPA 8260B Mod.	477873		
92430519002	**MW-45**	EPA 8260B Mod.	477873		
92430519003	**MW-24D**	EPA 8260B Mod.	477873		
92430519004	**MW-31D**	EPA 8260B Mod.	477873		
92430519005	**MW-35D**	EPA 8260B Mod.	477873		
92430519006	**MW-34D**	EPA 8260B Mod.	477873		
92430519007	**MW-32D**	EPA 8260B Mod.	477873		
92430519008	**MW-36D**	EPA 8260B Mod.	477873		
92430519009	**MW-33D-235**	EPA 8260B Mod.	477873		
92430519010	**MW-33D-295**	EPA 8260B Mod.	477873		
92430519011	**MW-30D-273**	EPA 8260B Mod.	477873		
92430519012	**MW-30D-413**	EPA 8260B Mod.	477873		
92430519013	**MW-29D**	EPA 8260B Mod.	478121		
92430519014	**MW-28D**	EPA 8260B Mod.	478121		
92430519015	**DUP 052219A**	EPA 8260B Mod.	478121		
92430519016	**MW-25D-130**	EPA 8260B Mod.	478121		
92430519017	**MW-25D-190**	EPA 8260B Mod.	478121		
92430519018	**Trip Blank**	EPA 8260B Mod.	478121		

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: Hernchn

Project

WO# : 92430519

92430519

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

Custody Seal Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No

Date/Initials Person Examining Contents: D 5-24-19

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

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 92T048 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp (°C): 3.4 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): _____

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	9.
Headspace in VOA Vials (>5-6mm)?	☑ Yes	☐ No	☐ N/A	10.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Only recieved 5 vials for MW-35D

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: (JR) **Date:** 5/24

Project Manager SRF Review: (JR) **Date:** 5/24

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # WO# : 92430519

PM: PTE Due Date: 06/03/19

CLIENT: 92-WSP

Pg 1

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	\				\	\	\	\			\		\	\	\	6									\	\			
2	\				\	\	\	\			\		\	\	\	6									\	\			
3	\				\	\	\	\			\		\	\	\	6									\	\			
4	\				\	\	\	\			\		\	\	\	6									\	\			
5	\				\	\	\	\			\		\	\	\	6									\	\			
6	\				\	\	\	\			\		\	\	\	6									\	\			
7	\				\	\	\	\			\		\	\	\	6									\	\			
8	\				\	\	\	\			\		\	\	\	6									\	\			
9	\				\	\	\	\			\		\	\	\	6									\	\			
10	\				\	\	\	\			\		\	\	\	6									\	\			
11	\				\	\	\	\			\		\	\	\	6									\	\			
12	\				\	\	\	\			\		\	\	\	6									\	\			

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Proje **WO# : 92430519**

PM: PTE Due Date: 06/03/19

CLIENT: 92-WSP

Pg 2

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	\				\	\	\	\			\		\	\	\	6									\	\			
2	\				\	\	\	\			\		\	\	\	6									\	\			
3	\				\	\	\	\			\		\	\	\	4-TB									\	\			
4	\				\	\	\	\			\		\	\	\	6									\	\			
5	\				\	\	\	\			\		\	\	\	6									\	\			
6	\				\	\	\	\			\		\	\	\	6									\	\			
7	\				\	\	\	\			\		\	\	\										\	\			
8	\				\	\	\	\			\		\	\	\										\	\			
9	\				\	\	\	\			\		\	\	\										\	\			
10	\				\	\	\	\			\		\	\	\										\	\			
11	\				\	\	\	\			\		\	\	\										\	\			
12	\				\	\	\	\			\		\	\	\										\	\			

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Offsite

CHAIN-OF-CUSTODY RECORD

WSP | Parsons Brinckerhoff Office Address	Herndon, VA
Project Name	KopFlex
WSP | Parsons Brinckerhoff Contact Name	Eric Johnson
Project Location	Hanover, MD
WSP | Parsons Brinckerhoff Contact E-mail	eric.johnson@wspgroup.com
Project Number & Task	31401545.011
WSP | Parsons Brinckerhoff Contact Phone	571 232 5045
Sampler(s) Name(s)	CC
Sampler(s) Signature(s)	

Requested Analyses & Preservatives

No. 004540 | WSP | PARSONS BRINCKERHOFF

Laboratory Name & Location: Pace, NC

Laboratory Project Manager: Taylor Etell

Requested Turn-Around-Time: [X] Standard [ ] 24 HR [ ] 48 HR [ ] 72 HR [ ] ___ HR

92430519

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	VOC 8260	1,4-dioxane 8260 SIMS	Sample Comments
MW-46D	AQ	5/21/19		17	05	6	X	X	-001
MW-45		5/22/19		08	45	6	X	X	-002
MW-24D				09	05	6	X	X	-003
MW-31D				10	45	6	X	X	-004
MW-35D				11	10	6	X	X	-005
MW-34D				11	30	6	X	X	-006
MW-32D				11	55	6	X	X	-007
MW-36D				12	10	6	X	X	-008
MW-33D-235				13	55	6	X	X	-009
MW-33D-295				13	45	6	X	X	-010
MW-30D-273				14	20	6	X	X	-011
MW-30D-413				14	25	6	X	X	-012
MW-29D				14	45	6	X	X	-013
MW-28D				15	20	6	X	X	-014
Trip Blank		lab provided				4	X	X	-018

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
	5/23/19	1430	FedEx			FedEx	8127 8179 4632
Relinquished By (Signature)	**Date**	**Time**	**Received By (Signature)**	**Date**	**Time**	**Number of Packages**	**Custody Seal Number(s)**
				5-24-19	9.50	3	

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

Offsite

CHAIN-OF-CUSTODY RECORD

WSP | Parsons Brinckerhoff Office Address	Herndon, VA
Project Name	Kopflex
WSP | Parsons Brinckerhoff Contact Name	eric johnson
Project Location	Hanover, MD
WSP | Parsons Brinckerhoff Contact E-mail	eric.johnson @wspgroup.com
Project Number & Task	31401545.011
WSP | Parsons Brinckerhoff Contact Phone	571 232 5045
Sampler(s) Name(s)	CC
Sampler(s) Signature(s)	

Requested Analyses & Preservatives

No. 004546 — WSP | PARSONS BRINCKERHOFF

Laboratory Name & Location: Pace, NC

Laboratory Project Manager: Taylor Ezell

Requested Turn-Around-Time: [X] Standard [ ] 24 HR [ ] 48 HR [ ] 72 HR [ ] ___ HR

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	VOCs 8260	1,4-dioxane 8260 SIMS	Sample Comments
DUP052219A	AQ	5/22/19		0400		6	X	X	-015
MW-25D-130	"	"		1555		6	X	X	-016
MW-25D-190	"	"		1540		4	X	X	-017

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
	5/23/19	1420	FedEx			FedEx	
Relinquished By (Signature)	**Date**	**Time**	**Received By (Signature)**	**Date**	**Time**	**Number of Packages**	**Custody Seal Number(s)**
				5-24-19	9:50	3	

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

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

December 03, 2019

Eric Johnson
WSP USA
13530 Dulles Technology Drive
Suite 300
Herndon, VA 20171

RE: Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Dear Eric Johnson:
Enclosed are the analytical results for sample(s) received by the laboratory on November 21, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Taylor Ezell
taylor.ezell@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Molly Long, WSP
Pam Robertson, WSP USA

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

CERTIFICATIONS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Pace Analytical Services Charlotte
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

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

SAMPLE SUMMARY

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92454724001	**MW-33D-295**	Water	11/20/19 08:40	11/21/19 09:32
92454724002	**MW-33D-235**	Water	11/20/19 08:55	11/21/19 09:32
92454724003	**MW-35D**	Water	11/20/19 09:20	11/21/19 09:32
92454724004	**MW-30D-413**	Water	11/20/19 09:45	11/21/19 09:32
92454724005	**MW-30D-273**	Water	11/20/19 09:55	11/21/19 09:32
92454724006	**MW-29D**	Water	11/20/19 10:10	11/21/19 09:32
92454724007	**MW-32D**	Water	11/20/19 10:30	11/21/19 09:32
92454724008	**MW-36D**	Water	11/20/19 10:50	11/21/19 09:32
92454724009	**MW-28D**	Water	11/20/19 11:05	11/21/19 09:32
92454724010	**MW-31D**	Water	11/20/19 11:25	11/21/19 09:32
92454724011	**MW-34D**	Water	11/20/19 11:45	11/21/19 09:32
92454724012	**TRIP BLANK**	Water	11/20/19 00:00	11/21/19 09:32
92454724013	**DUP 111919B**	Water	11/19/19 00:00	11/21/19 09:32
92454724014	**MW-25D-130**	Water	11/19/19 16:00	11/21/19 09:32
92454724015	**MW-25D-192**	Water	11/19/19 16:15	11/21/19 09:32
92454724016	**MW-46D**	Water	11/19/19 12:25	11/21/19 09:32
92454724017	**MW-45**	Water	11/19/19 12:35	11/21/19 09:32
92454724018	**MW-24D**	Water	11/19/19 12:55	11/21/19 09:32

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

SAMPLE ANALYTE COUNT

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92454724001	**MW-33D-295**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724002	**MW-33D-235**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724003	**MW-35D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724004	**MW-30D-413**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724005	**MW-30D-273**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724006	**MW-29D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724007	**MW-32D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724008	**MW-36D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724009	**MW-28D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724010	**MW-31D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724011	**MW-34D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724012	**TRIP BLANK**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724013	**DUP 111919B**	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724014	**MW-25D-130**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724015	**MW-25D-192**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724016	**MW-46D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724017	**MW-45**	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92454724018	**MW-24D**	EPA 8260B	DLK	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-33D-295 **Lab ID: 92454724001** Collected: 11/20/19 08:40 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 12:19	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 12:19	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 12:19	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 12:19	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 12:19	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 12:19	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 12:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 12:19	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 12:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 12:19	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 12:19	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 12:19	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 12:19	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 12:19	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 12:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 12:19	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 12:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 12:19	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 12:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:19	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 12:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 12:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 12:19	107-06-2	
1,1-Dichloroethene	**3.7**	ug/L	1.0	1		11/27/19 12:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 12:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 12:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 12:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 12:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 12:19	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 12:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 12:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 12:19	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 12:19	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 12:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 12:19	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 12:19	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 12:19	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 12:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 12:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 12:19	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 12:19	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 12:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 12:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 12:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 12:19	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-33D-295 **Lab ID: 92454724001** Collected: 11/20/19 08:40 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 12:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 12:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 12:19	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 12:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 12:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 12:19	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 12:19	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 12:19	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 12:19	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 12:19	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 12:19	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%	70-130	1		11/27/19 12:19	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130	1		11/27/19 12:19	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		11/27/19 12:19	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**6.3**	ug/L	2.0	1		11/23/19 02:57	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	50-150	1		11/23/19 02:57	17060-07-0	
Toluene-d8 (S)	106	%	50-150	1		11/23/19 02:57	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-33D-235 **Lab ID: 92454724002** Collected: 11/20/19 08:55 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 10:47	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 10:47	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 10:47	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 10:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 10:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 10:47	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 10:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 10:47	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 10:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 10:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 10:47	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 10:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 10:47	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 10:47	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 10:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 10:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 10:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 10:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 10:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 10:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 10:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 10:47	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 10:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 10:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 10:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 10:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 10:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 10:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 10:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 10:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 10:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 10:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 10:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 10:47	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 10:47	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 10:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 10:47	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 10:47	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 10:47	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 10:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 10:47	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 10:47	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 10:47	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 10:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 10:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 10:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 10:47	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-33D-235 **Lab ID: 92454724002** Collected: 11/20/19 08:55 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 10:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 10:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 10:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 10:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 10:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 10:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 10:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 10:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 10:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 10:47	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 10:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 10:47	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 10:47	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		11/27/19 10:47	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130	1		11/27/19 10:47	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		11/27/19 10:47	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 03:17	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	92	%	50-150	1		11/23/19 03:17	17060-07-0	
Toluene-d8 (S)	107	%	50-150	1		11/23/19 03:17	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-35D **Lab ID: 92454724003** Collected: 11/20/19 09:20 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 11:06	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 11:06	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 11:06	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 11:06	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 11:06	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 11:06	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 11:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 11:06	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 11:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 11:06	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 11:06	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 11:06	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 11:06	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 11:06	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 11:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 11:06	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 11:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 11:06	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 11:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:06	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 11:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 11:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 11:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:06	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:06	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 11:06	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 11:06	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 11:06	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 11:06	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 11:06	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 11:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 11:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 11:06	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 11:06	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 11:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 11:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 11:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 11:06	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-35D **Lab ID: 92454724003** Collected: 11/20/19 09:20 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 11:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 11:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 11:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 11:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 11:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 11:06	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 11:06	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 11:06	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 11:06	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 11:06	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 11:06	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		11/27/19 11:06	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130	1		11/27/19 11:06	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		11/27/19 11:06	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 20:22	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		11/23/19 20:22	17060-07-0	
Toluene-d8 (S)	105	%	50-150	1		11/23/19 20:22	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-30D-413 **Lab ID: 92454724004** Collected: 11/20/19 09:45 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 11:24	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 11:24	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 11:24	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 11:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 11:24	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 11:24	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 11:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 11:24	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 11:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 11:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 11:24	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 11:24	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 11:24	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 11:24	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 11:24	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 11:24	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 11:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 11:24	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 11:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:24	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 11:24	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 11:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 11:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:24	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:24	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:24	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 11:24	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 11:24	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 11:24	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 11:24	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 11:24	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 11:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 11:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 11:24	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 11:24	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 11:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 11:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 11:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 11:24	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-30D-413 **Lab ID: 92454724004** Collected: 11/20/19 09:45 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 11:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 11:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 11:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 11:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 11:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 11:24	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 11:24	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 11:24	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 11:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 11:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 11:24	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		11/27/19 11:24	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130	1		11/27/19 11:24	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		11/27/19 11:24	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 20:42	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	1		11/23/19 20:42	17060-07-0	
Toluene-d8 (S)	107	%	50-150	1		11/23/19 20:42	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-30D-273 **Lab ID: 92454724005** Collected: 11/20/19 09:55 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 21:46	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 21:46	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 21:46	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 21:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 21:46	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 21:46	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 21:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 21:46	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 21:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 21:46	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 21:46	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 21:46	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 21:46	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 21:46	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 21:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 21:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 21:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 21:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 21:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 21:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 21:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 21:46	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 21:46	75-71-8	
1,1-Dichloroethane	**1.1**	ug/L	1.0	1		11/27/19 21:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 21:46	107-06-2	
1,1-Dichloroethene	**43.3**	ug/L	1.0	1		11/27/19 21:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 21:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 21:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 21:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 21:46	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 21:46	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 21:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 21:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 21:46	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 21:46	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 21:46	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 21:46	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 21:46	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 21:46	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 21:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 21:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 21:46	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 21:46	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 21:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 21:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 21:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 21:46	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-30D-273 **Lab ID: 92454724005** Collected: 11/20/19 09:55 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 21:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 21:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 21:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 21:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 21:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 21:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 21:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 21:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 21:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 21:46	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 21:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 21:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 21:46	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	94	%	70-130	1		11/27/19 21:46	460-00-4	
1,2-Dichloroethane-d4 (S)	87	%	70-130	1		11/27/19 21:46	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		11/27/19 21:46	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**22.8**	ug/L	2.0	1		11/23/19 21:02	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	50-150	1		11/23/19 21:02	17060-07-0	
Toluene-d8 (S)	108	%	50-150	1		11/23/19 21:02	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-29D **Lab ID: 92454724006** Collected: 11/20/19 10:10 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 11:42	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 11:42	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 11:42	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 11:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 11:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 11:42	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 11:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 11:42	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 11:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 11:42	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 11:42	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 11:42	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 11:42	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 11:42	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 11:42	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 11:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 11:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 11:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 11:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:42	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 11:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 11:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 11:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 11:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 11:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 11:42	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 11:42	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 11:42	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 11:42	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 11:42	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 11:42	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 11:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 11:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 11:42	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 11:42	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 11:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 11:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 11:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 11:42	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-29D **Lab ID: 92454724006** Collected: 11/20/19 10:10 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 11:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 11:42	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 11:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 11:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 11:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 11:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 11:42	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 11:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 11:42	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 11:42	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 11:42	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 11:42	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		11/27/19 11:42	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130	1		11/27/19 11:42	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		11/27/19 11:42	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 21:21	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%	50-150	1		11/23/19 21:21	17060-07-0	
Toluene-d8 (S)	106	%	50-150	1		11/23/19 21:21	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-32D **Lab ID: 92454724007** Collected: 11/20/19 10:30 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 12:37	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 12:37	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 12:37	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 12:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 12:37	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 12:37	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 12:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 12:37	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 12:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 12:37	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 12:37	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 12:37	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 12:37	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 12:37	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 12:37	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 12:37	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 12:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 12:37	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 12:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 12:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 12:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 12:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 12:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 12:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 12:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 12:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 12:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 12:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 12:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 12:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 12:37	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 12:37	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 12:37	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 12:37	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 12:37	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 12:37	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 12:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 12:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 12:37	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 12:37	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 12:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 12:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 12:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 12:37	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-32D **Lab ID: 92454724007** Collected: 11/20/19 10:30 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 12:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 12:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 12:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 12:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 12:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 12:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 12:37	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 12:37	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 12:37	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 12:37	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 12:37	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 12:37	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		11/27/19 12:37	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130	1		11/27/19 12:37	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		11/27/19 12:37	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 21:41	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%	50-150	1		11/23/19 21:41	17060-07-0	
Toluene-d8 (S)	107	%	50-150	1		11/23/19 21:41	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-36D **Lab ID: 92454724008** Collected: 11/20/19 10:50 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 19:23	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 19:23	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 19:23	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 19:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 19:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 19:23	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 19:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 19:23	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 19:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 19:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 19:23	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 19:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 19:23	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:23	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 19:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 19:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 19:23	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 19:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:23	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 19:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 19:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 19:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:23	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 19:23	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 19:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 19:23	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 19:23	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 19:23	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 19:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 19:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 19:23	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 19:23	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 19:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 19:23	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-36D **Lab ID: 92454724008** Collected: 11/20/19 10:50 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 19:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 19:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 19:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 19:23	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 19:23	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 19:23	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 19:23	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 19:23	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 19:23	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		11/27/19 19:23	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130	1		11/27/19 19:23	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		11/27/19 19:23	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 22:01	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%	50-150	1		11/23/19 22:01	17060-07-0	
Toluene-d8 (S)	108	%	50-150	1		11/23/19 22:01	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-28D **Lab ID: 92454724009** Collected: 11/20/19 11:05 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 19:41	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 19:41	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 19:41	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 19:41	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 19:41	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 19:41	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 19:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 19:41	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 19:41	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 19:41	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 19:41	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 19:41	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 19:41	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:41	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:41	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 19:41	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 19:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 19:41	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 19:41	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:41	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:41	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:41	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 19:41	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 19:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 19:41	107-06-2	
1,1-Dichloroethene	**6.1**	ug/L	1.0	1		11/27/19 19:41	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:41	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:41	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:41	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:41	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:41	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 19:41	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 19:41	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 19:41	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 19:41	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 19:41	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 19:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 19:41	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 19:41	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 19:41	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 19:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:41	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 19:41	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-28D **Lab ID: 92454724009** Collected: 11/20/19 11:05 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 19:41	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:41	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:41	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 19:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 19:41	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 19:41	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 19:41	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 19:41	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 19:41	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 19:41	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 19:41	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		11/27/19 19:41	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		11/27/19 19:41	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		11/27/19 19:41	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**3.9**	ug/L	2.0	1		11/23/19 22:21	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		11/23/19 22:21	17060-07-0	
Toluene-d8 (S)	108	%	50-150	1		11/23/19 22:21	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-31D **Lab ID: 92454724010** Collected: 11/20/19 11:25 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 18:47	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 18:47	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 18:47	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 18:47	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 18:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 18:47	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 18:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 18:47	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 18:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 18:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 18:47	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 18:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 18:47	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 18:47	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 18:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 18:47	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 18:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 18:47	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 18:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 18:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 18:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 18:47	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 18:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 18:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 18:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 18:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 18:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 18:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 18:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 18:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 18:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 18:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 18:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 18:47	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 18:47	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 18:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 18:47	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 18:47	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 18:47	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 18:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 18:47	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 18:47	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 18:47	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 18:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 18:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 18:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 18:47	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-31D **Lab ID: 92454724010** Collected: 11/20/19 11:25 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 18:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 18:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 18:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 18:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 18:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 18:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 18:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 18:47	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 18:47	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 18:47	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 18:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 18:47	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 18:47	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		11/27/19 18:47	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130	1		11/27/19 18:47	17060-07-0	
Toluene-d8 (S)	104	%	70-130	1		11/27/19 18:47	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 22:41	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	50-150	1		11/23/19 22:41	17060-07-0	
Toluene-d8 (S)	107	%	50-150	1		11/23/19 22:41	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-34D **Lab ID: 92454724011** Collected: 11/20/19 11:45 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 19:05	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 19:05	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 19:05	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 19:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 19:05	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 19:05	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 19:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 19:05	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 19:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 19:05	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 19:05	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 19:05	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 19:05	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:05	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:05	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 19:05	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 19:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 19:05	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 19:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:05	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 19:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 19:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 19:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:05	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:05	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:05	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:05	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 19:05	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 19:05	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 19:05	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 19:05	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 19:05	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 19:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 19:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 19:05	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 19:05	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 19:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 19:05	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-34D **Lab ID: 92454724011** Collected: 11/20/19 11:45 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 19:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 19:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 19:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 19:05	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 19:05	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 19:05	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 19:05	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 19:05	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 19:05	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		11/27/19 19:05	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		11/27/19 19:05	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		11/27/19 19:05	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 23:01	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%	50-150	1		11/23/19 23:01	17060-07-0	
Toluene-d8 (S)	108	%	50-150	1		11/23/19 23:01	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: TRIP BLANK **Lab ID: 92454724012** Collected: 11/20/19 00:00 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 17:53	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 17:53	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 17:53	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 17:53	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 17:53	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 17:53	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 17:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 17:53	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 17:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 17:53	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 17:53	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 17:53	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 17:53	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 17:53	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 17:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 17:53	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 17:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 17:53	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 17:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 17:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 17:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 17:53	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 17:53	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 17:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 17:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 17:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 17:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 17:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 17:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 17:53	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 17:53	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 17:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 17:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 17:53	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 17:53	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 17:53	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 17:53	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 17:53	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 17:53	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 17:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 17:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 17:53	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 17:53	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 17:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 17:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 17:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 17:53	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: TRIP BLANK **Lab ID: 92454724012** Collected: 11/20/19 00:00 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 17:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 17:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 17:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 17:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 17:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 17:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 17:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 17:53	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 17:53	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 17:53	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 17:53	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 17:53	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 17:53	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		11/27/19 17:53	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130	1		11/27/19 17:53	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		11/27/19 17:53	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/23/19 19:42	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	50-150	1		11/23/19 19:42	17060-07-0	
Toluene-d8 (S)	105	%	50-150	1		11/23/19 19:42	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: DUP 111919B **Lab ID: 92454724013** Collected: 11/19/19 00:00 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 13:39	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 13:39	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 13:39	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 13:39	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 13:39	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 13:39	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 13:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 13:39	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 13:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 13:39	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 13:39	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 13:39	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 13:39	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 13:39	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 13:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 13:39	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 13:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 13:39	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 13:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:39	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 13:39	75-71-8	L1
1,1-Dichloroethane	**13.8**	ug/L	1.0	1		11/27/19 13:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 13:39	107-06-2	
1,1-Dichloroethene	**59.4**	ug/L	1.0	1		11/27/19 13:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 13:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 13:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 13:39	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 13:39	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 13:39	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 13:39	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 13:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 13:39	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 13:39	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 13:39	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 13:39	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 13:39	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 13:39	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 13:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 13:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 13:39	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 13:39	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 13:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 13:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 13:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 13:39	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: DUP 111919B **Lab ID: 92454724013** Collected: 11/19/19 00:00 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 13:39	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:39	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:39	120-82-1	
1,1,1-Trichloroethane	**7.6**	ug/L	1.0	1		11/27/19 13:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 13:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 13:39	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 13:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 13:39	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 13:39	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 13:39	75-01-4	L1
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 13:39	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 13:39	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 13:39	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	107	%	70-130	1		11/27/19 13:39	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		11/27/19 13:39	17060-07-0	
Toluene-d8 (S)	106	%	70-130	1		11/27/19 13:39	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**44.0**	ug/L	2.0	1		11/23/19 23:21	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%	50-150	1		11/23/19 23:21	17060-07-0	
Toluene-d8 (S)	108	%	50-150	1		11/23/19 23:21	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-25D-130 **Lab ID: 92454724014** Collected: 11/19/19 16:00 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 19:59	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 19:59	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 19:59	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 19:59	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 19:59	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 19:59	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 19:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 19:59	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 19:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 19:59	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 19:59	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 19:59	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 19:59	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:59	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 19:59	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 19:59	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 19:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 19:59	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 19:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 19:59	75-71-8	
1,1-Dichloroethane	**2.7**	ug/L	1.0	1		11/27/19 19:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 19:59	107-06-2	
1,1-Dichloroethene	**62.1**	ug/L	1.0	1		11/27/19 19:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 19:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 19:59	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 19:59	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 19:59	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 19:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 19:59	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 19:59	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 19:59	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 19:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 19:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 19:59	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 19:59	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 19:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 19:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 19:59	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-25D-130 **Lab ID: 92454724014** Collected: 11/19/19 16:00 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 19:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 19:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 19:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 19:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 19:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 19:59	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 19:59	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 19:59	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 19:59	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 19:59	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 19:59	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		11/27/19 19:59	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130	1		11/27/19 19:59	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		11/27/19 19:59	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**31.0**	ug/L	2.0	1		11/23/19 23:40	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%	50-150	1		11/23/19 23:40	17060-07-0	
Toluene-d8 (S)	110	%	50-150	1		11/23/19 23:40	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-25D-192 **Lab ID: 92454724015** Collected: 11/19/19 16:15 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 20:16	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 20:16	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 20:16	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 20:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 20:16	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 20:16	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 20:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 20:16	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 20:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 20:16	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 20:16	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 20:16	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 20:16	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 20:16	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 20:16	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 20:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 20:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 20:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 20:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:16	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 20:16	75-71-8	
1,1-Dichloroethane	**12.6**	ug/L	1.0	1		11/27/19 20:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 20:16	107-06-2	
1,1-Dichloroethene	**53.2**	ug/L	1.0	1		11/27/19 20:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 20:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 20:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 20:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 20:16	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 20:16	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 20:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 20:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 20:16	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 20:16	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 20:16	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 20:16	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 20:16	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 20:16	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 20:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 20:16	108-10-1	
Methyl-tert-butyl ether	**1.1**	ug/L	1.0	1		11/27/19 20:16	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 20:16	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 20:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 20:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 20:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 20:16	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-25D-192 **Lab ID: 92454724015** Collected: 11/19/19 16:15 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 20:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 20:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 20:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 20:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 20:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 20:16	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 20:16	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 20:16	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 20:16	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 20:16	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 20:16	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	94	%	70-130	1		11/27/19 20:16	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130	1		11/27/19 20:16	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		11/27/19 20:16	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**41.1**	ug/L	2.0	1		11/24/19 00:00	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%	50-150	1		11/24/19 00:00	17060-07-0	
Toluene-d8 (S)	109	%	50-150	1		11/24/19 00:00	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-46D **Lab ID: 92454724016** Collected: 11/19/19 12:25 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 20:34	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 20:34	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 20:34	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 20:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 20:34	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 20:34	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 20:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 20:34	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 20:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 20:34	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 20:34	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 20:34	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 20:34	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 20:34	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 20:34	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 20:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 20:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 20:34	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 20:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 20:34	75-71-8	
1,1-Dichloroethane	**23.4**	ug/L	1.0	1		11/27/19 20:34	75-34-3	
1,2-Dichloroethane	**1.4**	ug/L	1.0	1		11/27/19 20:34	107-06-2	
1,1-Dichloroethene	**114**	ug/L	1.0	1		11/27/19 20:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 20:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 20:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 20:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 20:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 20:34	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 20:34	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 20:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 20:34	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 20:34	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 20:34	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 20:34	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 20:34	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 20:34	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 20:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 20:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 20:34	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 20:34	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 20:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 20:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 20:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 20:34	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-46D **Lab ID: 92454724016** Collected: 11/19/19 12:25 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 20:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 20:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 20:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 20:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 20:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 20:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 20:34	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 20:34	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 20:34	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 20:34	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 20:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 20:34	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	1		11/27/19 20:34	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130	1		11/27/19 20:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		11/27/19 20:34	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**96.3**	ug/L	4.0	2		11/24/19 18:32	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	50-150	2		11/24/19 18:32	17060-07-0	
Toluene-d8 (S)	88	%	50-150	2		11/24/19 18:32	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-45 **Lab ID: 92454724017** Collected: 11/19/19 12:35 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		11/27/19 13:56	67-64-1	
Benzene	ND	ug/L	1.0	1		11/27/19 13:56	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/27/19 13:56	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/27/19 13:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/27/19 13:56	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/27/19 13:56	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/27/19 13:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/27/19 13:56	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		11/27/19 13:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/27/19 13:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/27/19 13:56	75-00-3	
Chloroform	ND	ug/L	5.0	1		11/27/19 13:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/27/19 13:56	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 13:56	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/27/19 13:56	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		11/27/19 13:56	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/27/19 13:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/27/19 13:56	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/27/19 13:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:56	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/27/19 13:56	75-71-8	L1
1,1-Dichloroethane	ND	ug/L	1.0	1		11/27/19 13:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/27/19 13:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/27/19 13:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 13:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/27/19 13:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 13:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/27/19 13:56	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/27/19 13:56	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/27/19 13:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 13:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/27/19 13:56	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		11/27/19 13:56	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		11/27/19 13:56	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/27/19 13:56	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		11/27/19 13:56	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/27/19 13:56	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		11/27/19 13:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/27/19 13:56	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/27/19 13:56	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		11/27/19 13:56	91-20-3	
Styrene	ND	ug/L	1.0	1		11/27/19 13:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 13:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/27/19 13:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/27/19 13:56	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-45 **Lab ID: 92454724017** Collected: 11/19/19 12:35 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		11/27/19 13:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/27/19 13:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/27/19 13:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/27/19 13:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/27/19 13:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/27/19 13:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/27/19 13:56	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/27/19 13:56	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/27/19 13:56	75-01-4	L1
Xylene (Total)	ND	ug/L	1.0	1		11/27/19 13:56	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		11/27/19 13:56	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/27/19 13:56	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	107	%	70-130	1		11/27/19 13:56	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		11/27/19 13:56	17060-07-0	
Toluene-d8 (S)	107	%	70-130	1		11/27/19 13:56	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		11/24/19 18:12	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%	50-150	1		11/24/19 18:12	17060-07-0	
Toluene-d8 (S)	91	%	50-150	1		11/24/19 18:12	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-24D **Lab ID: 92454724018** Collected: 11/19/19 12:55 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	125	5		12/02/19 18:57	67-64-1	
Benzene	ND	ug/L	5.0	5		12/02/19 18:57	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		12/02/19 18:57	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		12/02/19 18:57	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		12/02/19 18:57	75-27-4	
Bromoform	ND	ug/L	5.0	5		12/02/19 18:57	75-25-2	
Bromomethane	ND	ug/L	10.0	5		12/02/19 18:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	5		12/02/19 18:57	78-93-3	
Carbon tetrachloride	ND	ug/L	5.0	5		12/02/19 18:57	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		12/02/19 18:57	108-90-7	
Chloroethane	ND	ug/L	5.0	5		12/02/19 18:57	75-00-3	
Chloroform	ND	ug/L	25.0	5		12/02/19 18:57	67-66-3	
Chloromethane	ND	ug/L	5.0	5		12/02/19 18:57	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		12/02/19 18:57	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		12/02/19 18:57	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	25.0	5		12/02/19 18:57	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		12/02/19 18:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		12/02/19 18:57	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		12/02/19 18:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		12/02/19 18:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		12/02/19 18:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		12/02/19 18:57	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		12/02/19 18:57	75-71-8	L1,M0
1,1-Dichloroethane	**54.5**	ug/L	5.0	5		12/02/19 18:57	75-34-3	
1,2-Dichloroethane	**6.6**	ug/L	5.0	5		12/02/19 18:57	107-06-2	
1,1-Dichloroethene	**868**	ug/L	5.0	5		12/02/19 18:57	75-35-4	M1
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		12/02/19 18:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		12/02/19 18:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		12/02/19 18:57	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		12/02/19 18:57	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		12/02/19 18:57	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		12/02/19 18:57	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		12/02/19 18:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		12/02/19 18:57	10061-02-6	
Diisopropyl ether	ND	ug/L	5.0	5		12/02/19 18:57	108-20-3	
Ethylbenzene	ND	ug/L	5.0	5		12/02/19 18:57	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		12/02/19 18:57	87-68-3	
2-Hexanone	ND	ug/L	25.0	5		12/02/19 18:57	591-78-6	
p-Isopropyltoluene	ND	ug/L	5.0	5		12/02/19 18:57	99-87-6	
Methylene Chloride	ND	ug/L	25.0	5		12/02/19 18:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	5		12/02/19 18:57	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		12/02/19 18:57	1634-04-4	
Naphthalene	ND	ug/L	5.0	5		12/02/19 18:57	91-20-3	
Styrene	ND	ug/L	5.0	5		12/02/19 18:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		12/02/19 18:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		12/02/19 18:57	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	5		12/02/19 18:57	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Sample: MW-24D **Lab ID: 92454724018** Collected: 11/19/19 12:55 Received: 11/21/19 09:32 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	5.0	5		12/02/19 18:57	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		12/02/19 18:57	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		12/02/19 18:57	120-82-1	
1,1,1-Trichloroethane	**10.0**	ug/L	5.0	5		12/02/19 18:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		12/02/19 18:57	79-00-5	
Trichloroethene	**6.0**	ug/L	5.0	5		12/02/19 18:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		12/02/19 18:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	5		12/02/19 18:57	96-18-4	
Vinyl acetate	ND	ug/L	10.0	5		12/02/19 18:57	108-05-4	
Vinyl chloride	ND	ug/L	5.0	5		12/02/19 18:57	75-01-4	L1
Xylene (Total)	ND	ug/L	5.0	5		12/02/19 18:57	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	5		12/02/19 18:57	179601-23-1	
o-Xylene	ND	ug/L	5.0	5		12/02/19 18:57	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	110	%	70-130	5		12/02/19 18:57	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	5		12/02/19 18:57	17060-07-0	
Toluene-d8 (S)	112	%	70-130	5		12/02/19 18:57	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**155**	ug/L	5.0	2.5		11/24/19 01:00	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%	50-150	2.5		11/24/19 01:00	17060-07-0	
Toluene-d8 (S)	109	%	50-150	2.5		11/24/19 01:00	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

QC Batch: 511941 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92454724001, 92454724002, 92454724003, 92454724004, 92454724006, 92454724007

METHOD BLANK: 2745688 Matrix: Water
Associated Lab Samples: 92454724001, 92454724002, 92454724003, 92454724004, 92454724006, 92454724007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/27/19 05:17	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/27/19 05:17	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/27/19 05:17	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/27/19 05:17	
1,1-Dichloroethane	ug/L	ND	1.0	11/27/19 05:17	
1,1-Dichloroethene	ug/L	ND	1.0	11/27/19 05:17	
1,1-Dichloropropene	ug/L	ND	1.0	11/27/19 05:17	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/27/19 05:17	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/27/19 05:17	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/27/19 05:17	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/27/19 05:17	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/27/19 05:17	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/27/19 05:17	
1,2-Dichloroethane	ug/L	ND	1.0	11/27/19 05:17	
1,2-Dichloropropane	ug/L	ND	1.0	11/27/19 05:17	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/27/19 05:17	
1,3-Dichloropropane	ug/L	ND	1.0	11/27/19 05:17	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/27/19 05:17	
2,2-Dichloropropane	ug/L	ND	1.0	11/27/19 05:17	
2-Butanone (MEK)	ug/L	ND	5.0	11/27/19 05:17	
2-Chlorotoluene	ug/L	ND	1.0	11/27/19 05:17	
2-Hexanone	ug/L	ND	5.0	11/27/19 05:17	
4-Chlorotoluene	ug/L	ND	1.0	11/27/19 05:17	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/27/19 05:17	
Acetone	ug/L	ND	25.0	11/27/19 05:17	
Benzene	ug/L	ND	1.0	11/27/19 05:17	
Bromobenzene	ug/L	ND	1.0	11/27/19 05:17	
Bromochloromethane	ug/L	ND	1.0	11/27/19 05:17	
Bromodichloromethane	ug/L	ND	1.0	11/27/19 05:17	
Bromoform	ug/L	ND	1.0	11/27/19 05:17	
Bromomethane	ug/L	ND	2.0	11/27/19 05:17	
Carbon tetrachloride	ug/L	ND	1.0	11/27/19 05:17	
Chlorobenzene	ug/L	ND	1.0	11/27/19 05:17	
Chloroethane	ug/L	ND	1.0	11/27/19 05:17	
Chloroform	ug/L	ND	5.0	11/27/19 05:17	
Chloromethane	ug/L	ND	1.0	11/27/19 05:17	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/27/19 05:17	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/27/19 05:17	
Dibromochloromethane	ug/L	ND	1.0	11/27/19 05:17	
Dibromomethane	ug/L	ND	1.0	11/27/19 05:17	
Dichlorodifluoromethane	ug/L	ND	1.0	11/27/19 05:17	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

METHOD BLANK: 2745688 Matrix: Water
Associated Lab Samples: 92454724001, 92454724002, 92454724003, 92454724004, 92454724006, 92454724007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	11/27/19 05:17	
Ethylbenzene	ug/L	ND	1.0	11/27/19 05:17	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/27/19 05:17	
m&p-Xylene	ug/L	ND	2.0	11/27/19 05:17	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/27/19 05:17	
Methylene Chloride	ug/L	ND	5.0	11/27/19 05:17	
Naphthalene	ug/L	ND	1.0	11/27/19 05:17	
o-Xylene	ug/L	ND	1.0	11/27/19 05:17	
p-Isopropyltoluene	ug/L	ND	1.0	11/27/19 05:17	
Styrene	ug/L	ND	1.0	11/27/19 05:17	
Tetrachloroethene	ug/L	ND	1.0	11/27/19 05:17	
Toluene	ug/L	ND	1.0	11/27/19 05:17	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/27/19 05:17	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/27/19 05:17	
Trichloroethene	ug/L	ND	1.0	11/27/19 05:17	
Trichlorofluoromethane	ug/L	ND	1.0	11/27/19 05:17	
Vinyl acetate	ug/L	ND	2.0	11/27/19 05:17	
Vinyl chloride	ug/L	ND	1.0	11/27/19 05:17	
Xylene (Total)	ug/L	ND	1.0	11/27/19 05:17	
1,2-Dichloroethane-d4 (S)	%	89	70-130	11/27/19 05:17	
4-Bromofluorobenzene (S)	%	101	70-130	11/27/19 05:17	
Toluene-d8 (S)	%	101	70-130	11/27/19 05:17	

LABORATORY CONTROL SAMPLE: 2745689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.1	100	70-130	
1,1,1-Trichloroethane	ug/L	50	45.7	91	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.8	100	70-130	
1,1,2-Trichloroethane	ug/L	50	51.7	103	70-130	
1,1-Dichloroethane	ug/L	50	48.5	97	70-130	
1,1-Dichloroethene	ug/L	50	44.7	89	70-130	
1,1-Dichloropropene	ug/L	50	50.5	101	70-130	
1,2,3-Trichlorobenzene	ug/L	50	54.8	110	70-130	
1,2,3-Trichloropropane	ug/L	50	49.2	98	70-130	
1,2,4-Trichlorobenzene	ug/L	50	51.4	103	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	54.5	109	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.7	103	70-130	
1,2-Dichlorobenzene	ug/L	50	49.2	98	70-130	
1,2-Dichloroethane	ug/L	50	42.2	84	70-130	
1,2-Dichloropropane	ug/L	50	51.0	102	70-130	
1,3-Dichlorobenzene	ug/L	50	48.3	97	70-130	
1,3-Dichloropropane	ug/L	50	50.7	101	70-131	
1,4-Dichlorobenzene	ug/L	50	49.6	99	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

LABORATORY CONTROL SAMPLE: 2745689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	42.4	85	69-130	
2-Butanone (MEK)	ug/L	100	111	111	64-135	
2-Chlorotoluene	ug/L	50	48.0	96	70-130	
2-Hexanone	ug/L	100	105	105	66-135	
4-Chlorotoluene	ug/L	50	47.8	96	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	107	107	70-130	
Acetone	ug/L	100	118	118	61-157	
Benzene	ug/L	50	50.6	101	70-130	
Bromobenzene	ug/L	50	51.7	103	70-130	
Bromochloromethane	ug/L	50	49.4	99	70-130	
Bromodichloromethane	ug/L	50	49.0	98	70-130	
Bromoform	ug/L	50	53.3	107	70-130	
Bromomethane	ug/L	50	45.0	90	38-130	
Carbon tetrachloride	ug/L	50	46.4	93	70-130	
Chlorobenzene	ug/L	50	48.6	97	70-130	
Chloroethane	ug/L	50	32.1	64	37-142	
Chloroform	ug/L	50	47.4	95	70-130	
Chloromethane	ug/L	50	47.2	94	48-130	
cis-1,2-Dichloroethene	ug/L	50	46.5	93	70-130	
cis-1,3-Dichloropropene	ug/L	50	52.4	105	70-130	
Dibromochloromethane	ug/L	50	50.5	101	70-130	
Dibromomethane	ug/L	50	51.2	102	70-130	
Dichlorodifluoromethane	ug/L	50	52.0	104	53-134	
Diisopropyl ether	ug/L	50	51.3	103	70-135	
Ethylbenzene	ug/L	50	46.2	92	70-130	
Hexachloro-1,3-butadiene	ug/L	50	50.1	100	68-132	
m&p-Xylene	ug/L	100	93.7	94	70-130	
Methyl-tert-butyl ether	ug/L	50	49.3	99	70-130	
Methylene Chloride	ug/L	50	44.8	90	67-132	
Naphthalene	ug/L	50	53.9	108	70-130	
o-Xylene	ug/L	50	48.5	97	70-130	
p-Isopropyltoluene	ug/L	50	48.5	97	70-130	
Styrene	ug/L	50	50.3	101	70-130	
Tetrachloroethene	ug/L	50	47.6	95	69-130	
Toluene	ug/L	50	48.4	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.4	95	70-130	
trans-1,3-Dichloropropene	ug/L	50	50.6	101	70-130	
Trichloroethene	ug/L	50	48.7	97	70-130	
Trichlorofluoromethane	ug/L	50	36.5	73	63-130	
Vinyl acetate	ug/L	100	95.9	96	55-143	
Vinyl chloride	ug/L	50	53.7	107	70-131	
Xylene (Total)	ug/L	150	142	95	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2745690 2745691

Parameter	Units	92454473012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	800	800	901	901	113	113	73-134	0	30	
1,1,1-Trichloroethane	ug/L	ND	800	800	908	896	113	112	82-143	1	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	800	800	885	895	111	112	70-136	1	30	
1,1,2-Trichloroethane	ug/L	ND	800	800	889	893	111	112	70-135	0	30	
1,1-Dichloroethane	ug/L	ND	800	800	875	877	109	110	70-139	0	30	
1,1-Dichloroethene	ug/L	ND	800	800	910	894	114	112	70-154	2	30	
1,1-Dichloropropene	ug/L	ND	800	800	960	941	120	118	70-149	2	30	
1,2,3-Trichlorobenzene	ug/L	ND	800	800	934	1010	117	126	70-135	8	30	
1,2,3-Trichloropropane	ug/L	ND	800	800	938	902	117	113	71-137	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	800	800	950	971	119	121	73-140	2	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	800	800	906	952	113	119	65-134	5	30	
1,2-Dibromoethane (EDB)	ug/L	ND	800	800	911	899	114	112	70-137	1	30	
1,2-Dichlorobenzene	ug/L	ND	800	800	946	928	118	116	70-133	2	30	
1,2-Dichloroethane	ug/L	ND	800	800	817	827	102	103	70-137	1	30	
1,2-Dichloropropane	ug/L	ND	800	800	887	904	111	113	70-140	2	30	
1,3-Dichlorobenzene	ug/L	ND	800	800	947	908	118	114	70-135	4	30	
1,3-Dichloropropane	ug/L	ND	800	800	924	901	115	113	70-143	2	30	
1,4-Dichlorobenzene	ug/L	ND	800	800	954	920	119	115	70-133	4	30	
2,2-Dichloropropane	ug/L	ND	800	800	842	847	105	106	61-148	1	30	
2-Butanone (MEK)	ug/L	1170	1600	1600	2690	2730	95	98	60-139	1	30	
2-Chlorotoluene	ug/L	ND	800	800	958	933	120	117	70-144	3	30	
2-Hexanone	ug/L	ND	1600	1600	1700	1740	103	106	65-138	2	30	
4-Chlorotoluene	ug/L	ND	800	800	929	912	116	114	70-137	2	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	1600	1600	1710	1780	106	110	65-135	4	30	
Acetone	ug/L	8790	1600	1600	10700	10900	117	132	60-148	2	30	
Benzene	ug/L	2090	800	800	3070	3080	122	123	70-151	0	30	
Bromobenzene	ug/L	ND	800	800	948	932	119	117	70-136	2	30	
Bromochloromethane	ug/L	ND	800	800	881	885	110	111	70-141	0	30	
Bromodichloromethane	ug/L	ND	800	800	869	890	109	111	70-138	2	30	
Bromoform	ug/L	ND	800	800	885	873	111	109	63-130	1	30	
Bromomethane	ug/L	ND	800	800	932	921	117	115	15-152	1	30	
Carbon tetrachloride	ug/L	ND	800	800	943	935	118	117	70-143	1	30	
Chlorobenzene	ug/L	ND	800	800	927	912	116	114	70-138	2	30	
Chloroethane	ug/L	ND	800	800	843	802	105	100	52-163	5	30	
Chloroform	ug/L	ND	800	800	879	865	110	108	70-139	2	30	
Chloromethane	ug/L	ND	800	800	755	729	94	91	41-139	3	30	
cis-1,2-Dichloroethene	ug/L	ND	800	800	866	866	108	108	70-141	0	30	
cis-1,3-Dichloropropene	ug/L	ND	800	800	897	895	112	112	70-137	0	30	
Dibromochloromethane	ug/L	ND	800	800	894	861	112	108	70-134	4	30	
Dibromomethane	ug/L	ND	800	800	886	900	111	113	70-138	2	30	
Dichlorodifluoromethane	ug/L	ND	800	800	745	725	93	91	47-155	3	30	
Diisopropyl ether	ug/L	ND	800	800	827	842	103	105	63-144	2	30	
Ethylbenzene	ug/L	251	800	800	1230	1200	123	119	66-153	2	30	
Hexachloro-1,3-butadiene	ug/L	ND	800	800	955	926	119	116	65-149	3	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2745690 2745691

Parameter	Units	92454473012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	613	1600	1600	2530	2460	120	116	69-152	3	30	
Methyl-tert-butyl ether	ug/L	ND	800	800	842	861	105	108	54-156	2	30	
Methylene Chloride	ug/L	ND	800	800	889	876	111	109	42-159	2	30	
Naphthalene	ug/L	237	800	800	1140	1280	112	130	61-148	12	30	
o-Xylene	ug/L	146	800	800	1070	1040	116	111	70-148	3	30	
p-Isopropyltoluene	ug/L	ND	800	800	1010	973	123	119	70-146	3	30	
Styrene	ug/L	ND	800	800	932	901	116	113	70-135	3	30	
Tetrachloroethene	ug/L	ND	800	800	891	868	111	108	59-143	3	30	
Toluene	ug/L	246	800	800	1180	1140	117	111	59-148	4	30	
trans-1,2-Dichloroethene	ug/L	ND	800	800	894	882	112	110	70-146	1	30	
trans-1,3-Dichloropropene	ug/L	ND	800	800	874	860	109	107	70-135	2	30	
Trichloroethene	ug/L	ND	800	800	919	933	115	117	70-147	1	30	
Trichlorofluoromethane	ug/L	ND	800	800	860	843	107	105	70-148	2	30	
Vinyl acetate	ug/L	ND	1600	1600	1690	1690	106	106	49-151	0	30	
Vinyl chloride	ug/L	ND	800	800	873	860	109	107	70-156	2	30	
Xylene (Total)	ug/L	759	2400	2400	3600	3500	118	114	63-158	3	30	
1,2-Dichloroethane-d4 (S)	%						99	100	70-130			
4-Bromofluorobenzene (S)	%						97	97	70-130			
Toluene-d8 (S)	%						99	98	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

QC Batch: 511970 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92454724005, 92454724008, 92454724009, 92454724010, 92454724011, 92454724012, 92454724014, 92454724015, 92454724016

METHOD BLANK: 2745850 Matrix: Water
Associated Lab Samples: 92454724005, 92454724008, 92454724009, 92454724010, 92454724011, 92454724012, 92454724014, 92454724015, 92454724016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/27/19 17:35	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/27/19 17:35	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/27/19 17:35	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/27/19 17:35	
1,1-Dichloroethane	ug/L	ND	1.0	11/27/19 17:35	
1,1-Dichloroethene	ug/L	ND	1.0	11/27/19 17:35	
1,1-Dichloropropene	ug/L	ND	1.0	11/27/19 17:35	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/27/19 17:35	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/27/19 17:35	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/27/19 17:35	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/27/19 17:35	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/27/19 17:35	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/27/19 17:35	
1,2-Dichloroethane	ug/L	ND	1.0	11/27/19 17:35	
1,2-Dichloropropane	ug/L	ND	1.0	11/27/19 17:35	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/27/19 17:35	
1,3-Dichloropropane	ug/L	ND	1.0	11/27/19 17:35	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/27/19 17:35	
2,2-Dichloropropane	ug/L	ND	1.0	11/27/19 17:35	
2-Butanone (MEK)	ug/L	ND	5.0	11/27/19 17:35	
2-Chlorotoluene	ug/L	ND	1.0	11/27/19 17:35	
2-Hexanone	ug/L	ND	5.0	11/27/19 17:35	
4-Chlorotoluene	ug/L	ND	1.0	11/27/19 17:35	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/27/19 17:35	
Acetone	ug/L	ND	25.0	11/27/19 17:35	
Benzene	ug/L	ND	1.0	11/27/19 17:35	
Bromobenzene	ug/L	ND	1.0	11/27/19 17:35	
Bromochloromethane	ug/L	ND	1.0	11/27/19 17:35	
Bromodichloromethane	ug/L	ND	1.0	11/27/19 17:35	
Bromoform	ug/L	ND	1.0	11/27/19 17:35	
Bromomethane	ug/L	ND	2.0	11/27/19 17:35	
Carbon tetrachloride	ug/L	ND	1.0	11/27/19 17:35	
Chlorobenzene	ug/L	ND	1.0	11/27/19 17:35	
Chloroethane	ug/L	ND	1.0	11/27/19 17:35	
Chloroform	ug/L	ND	5.0	11/27/19 17:35	
Chloromethane	ug/L	ND	1.0	11/27/19 17:35	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/27/19 17:35	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/27/19 17:35	
Dibromochloromethane	ug/L	ND	1.0	11/27/19 17:35	
Dibromomethane	ug/L	ND	1.0	11/27/19 17:35	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

METHOD BLANK: 2745850 Matrix: Water

Associated Lab Samples: 92454724005, 92454724008, 92454724009, 92454724010, 92454724011, 92454724012, 92454724014, 92454724015, 92454724016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	11/27/19 17:35	
Diisopropyl ether	ug/L	ND	1.0	11/27/19 17:35	
Ethylbenzene	ug/L	ND	1.0	11/27/19 17:35	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/27/19 17:35	
m&p-Xylene	ug/L	ND	2.0	11/27/19 17:35	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/27/19 17:35	
Methylene Chloride	ug/L	ND	5.0	11/27/19 17:35	
Naphthalene	ug/L	ND	1.0	11/27/19 17:35	
o-Xylene	ug/L	ND	1.0	11/27/19 17:35	
p-Isopropyltoluene	ug/L	ND	1.0	11/27/19 17:35	
Styrene	ug/L	ND	1.0	11/27/19 17:35	
Tetrachloroethene	ug/L	ND	1.0	11/27/19 17:35	
Toluene	ug/L	ND	1.0	11/27/19 17:35	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/27/19 17:35	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/27/19 17:35	
Trichloroethene	ug/L	ND	1.0	11/27/19 17:35	
Trichlorofluoromethane	ug/L	ND	1.0	11/27/19 17:35	
Vinyl acetate	ug/L	ND	2.0	11/27/19 17:35	
Vinyl chloride	ug/L	ND	1.0	11/27/19 17:35	
Xylene (Total)	ug/L	ND	1.0	11/27/19 17:35	
1,2-Dichloroethane-d4 (S)	%	94	70-130	11/27/19 17:35	
4-Bromofluorobenzene (S)	%	96	70-130	11/27/19 17:35	
Toluene-d8 (S)	%	103	70-130	11/27/19 17:35	

LABORATORY CONTROL SAMPLE: 2745851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.9	108	70-130	
1,1,1-Trichloroethane	ug/L	50	53.3	107	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.5	105	70-130	
1,1,2-Trichloroethane	ug/L	50	53.6	107	70-130	
1,1-Dichloroethane	ug/L	50	51.6	103	70-130	
1,1-Dichloroethene	ug/L	50	51.9	104	70-130	
1,1-Dichloropropene	ug/L	50	56.4	113	70-130	
1,2,3-Trichlorobenzene	ug/L	50	59.8	120	70-130	
1,2,3-Trichloropropane	ug/L	50	54.4	109	70-130	
1,2,4-Trichlorobenzene	ug/L	50	57.3	115	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	56.5	113	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	54.5	109	70-130	
1,2-Dichlorobenzene	ug/L	50	55.4	111	70-130	
1,2-Dichloroethane	ug/L	50	50.4	101	70-130	
1,2-Dichloropropane	ug/L	50	53.7	107	70-130	
1,3-Dichlorobenzene	ug/L	50	55.1	110	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

LABORATORY CONTROL SAMPLE: 2745851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichloropropane	ug/L	50	54.0	108	70-131	
1,4-Dichlorobenzene	ug/L	50	55.4	111	70-130	
2,2-Dichloropropane	ug/L	50	55.1	110	69-130	
2-Butanone (MEK)	ug/L	100	103	103	64-135	
2-Chlorotoluene	ug/L	50	52.6	105	70-130	
2-Hexanone	ug/L	100	101	101	66-135	
4-Chlorotoluene	ug/L	50	53.5	107	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.3	96	70-130	
Acetone	ug/L	100	113	113	61-157	
Benzene	ug/L	50	51.3	103	70-130	
Bromobenzene	ug/L	50	54.8	110	70-130	
Bromochloromethane	ug/L	50	54.2	108	70-130	
Bromodichloromethane	ug/L	50	53.7	107	70-130	
Bromoform	ug/L	50	53.8	108	70-130	
Bromomethane	ug/L	50	46.9	94	38-130	
Carbon tetrachloride	ug/L	50	54.7	109	70-130	
Chlorobenzene	ug/L	50	53.9	108	70-130	
Chloroethane	ug/L	50	39.9	80	37-142	
Chloroform	ug/L	50	51.6	103	70-130	
Chloromethane	ug/L	50	45.8	92	48-130	
cis-1,2-Dichloroethene	ug/L	50	51.0	102	70-130	
cis-1,3-Dichloropropene	ug/L	50	54.7	109	70-130	
Dibromochloromethane	ug/L	50	53.9	108	70-130	
Dibromomethane	ug/L	50	52.7	105	70-130	
Dichlorodifluoromethane	ug/L	50	49.9	100	53-134	
Diisopropyl ether	ug/L	50	50.0	100	70-135	
Ethylbenzene	ug/L	50	53.9	108	70-130	
Hexachloro-1,3-butadiene	ug/L	50	55.2	110	68-132	
m&p-Xylene	ug/L	100	106	106	70-130	
Methyl-tert-butyl ether	ug/L	50	51.1	102	70-130	
Methylene Chloride	ug/L	50	51.4	103	67-132	
Naphthalene	ug/L	50	56.9	114	70-130	
o-Xylene	ug/L	50	52.2	104	70-130	
p-Isopropyltoluene	ug/L	50	55.6	111	70-130	
Styrene	ug/L	50	54.4	109	70-130	
Tetrachloroethene	ug/L	50	51.7	103	69-130	
Toluene	ug/L	50	51.4	103	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.7	103	70-130	
trans-1,3-Dichloropropene	ug/L	50	52.9	106	70-130	
Trichloroethene	ug/L	50	54.4	109	70-130	
Trichlorofluoromethane	ug/L	50	48.4	97	63-130	
Vinyl acetate	ug/L	100	107	107	55-143	
Vinyl chloride	ug/L	50	53.2	106	70-131	
Xylene (Total)	ug/L	150	158	106	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			99	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE SAMPLE: 2747200

Parameter	Units	92454724011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.8	119	73-134	
1,1,1-Trichloroethane	ug/L	ND	20	25.2	126	82-143	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.4	112	70-136	
1,1,2-Trichloroethane	ug/L	ND	20	23.4	117	70-135	
1,1-Dichloroethane	ug/L	ND	20	24.2	121	70-139	
1,1-Dichloroethene	ug/L	ND	20	25.0	125	70-154	
1,1-Dichloropropene	ug/L	ND	20	26.7	133	70-149	
1,2,3-Trichlorobenzene	ug/L	ND	20	21.4	107	70-135	
1,2,3-Trichloropropane	ug/L	ND	20	22.7	113	71-137	
1,2,4-Trichlorobenzene	ug/L	ND	20	21.1	106	73-140	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	22.6	113	65-134	
1,2-Dibromoethane (EDB)	ug/L	ND	20	23.7	119	70-137	
1,2-Dichlorobenzene	ug/L	ND	20	21.2	106	70-133	
1,2-Dichloroethane	ug/L	ND	20	22.9	114	70-137	
1,2-Dichloropropane	ug/L	ND	20	23.1	116	70-140	
1,3-Dichlorobenzene	ug/L	ND	20	21.0	105	70-135	
1,3-Dichloropropane	ug/L	ND	20	23.4	117	70-143	
1,4-Dichlorobenzene	ug/L	ND	20	21.1	105	70-133	
2,2-Dichloropropane	ug/L	ND	20	26.1	131	61-148	
2-Butanone (MEK)	ug/L	ND	40	47.8	119	60-139	
2-Chlorotoluene	ug/L	ND	20	21.5	107	70-144	
2-Hexanone	ug/L	ND	40	44.8	112	65-138	
4-Chlorotoluene	ug/L	ND	20	21.5	108	70-137	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	45.0	113	65-135	
Acetone	ug/L	ND	40	46.5	116	60-148	
Benzene	ug/L	ND	20	23.8	119	70-151	
Bromobenzene	ug/L	ND	20	22.9	114	70-136	
Bromochloromethane	ug/L	ND	20	26.4	132	70-141	
Bromodichloromethane	ug/L	ND	20	23.5	118	70-138	
Bromoform	ug/L	ND	20	23.4	117	63-130	
Bromomethane	ug/L	ND	20	25.6	128	15-152	
Carbon tetrachloride	ug/L	ND	20	25.0	125	70-143	
Chlorobenzene	ug/L	ND	20	22.1	111	70-138	
Chloroethane	ug/L	ND	20	25.6	128	52-163	
Chloroform	ug/L	ND	20	25.0	125	70-139	
Chloromethane	ug/L	ND	20	22.7	113	41-139	
cis-1,2-Dichloroethene	ug/L	ND	20	24.4	122	70-141	
cis-1,3-Dichloropropene	ug/L	ND	20	23.8	119	70-137	
Dibromochloromethane	ug/L	ND	20	23.4	117	70-134	
Dibromomethane	ug/L	ND	20	24.0	120	70-138	
Dichlorodifluoromethane	ug/L	ND	20	27.3	137	47-155	
Diisopropyl ether	ug/L	ND	20	25.0	125	63-144	
Ethylbenzene	ug/L	ND	20	22.6	113	66-153	
Hexachloro-1,3-butadiene	ug/L	ND	20	23.0	115	65-149	
m&p-Xylene	ug/L	ND	40	44.6	111	69-152	
Methyl-tert-butyl ether	ug/L	ND	20	24.7	124	54-156	
Methylene Chloride	ug/L	ND	20	24.1	121	42-159	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE SAMPLE: 2747200

Parameter	Units	92454724011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	ND	20	21.1	105	61-148	
o-Xylene	ug/L	ND	20	22.9	114	70-148	
p-Isopropyltoluene	ug/L	ND	20	21.2	106	70-146	
Styrene	ug/L	ND	20	22.8	114	70-135	
Tetrachloroethene	ug/L	ND	20	23.2	116	59-143	
Toluene	ug/L	ND	20	23.0	115	59-148	
trans-1,2-Dichloroethene	ug/L	ND	20	25.1	126	70-146	
trans-1,3-Dichloropropene	ug/L	ND	20	23.6	118	70-135	
Trichloroethene	ug/L	ND	20	24.1	120	70-147	
Trichlorofluoromethane	ug/L	ND	20	24.8	124	70-148	
Vinyl acetate	ug/L	ND	40	45.9	115	49-151	
Vinyl chloride	ug/L	ND	20	28.1	140	70-156	
Xylene (Total)	ug/L	ND	60	67.5	112	63-158	
1,2-Dichloroethane-d4 (S)	%				97	70-130	
4-Bromofluorobenzene (S)	%				100	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 2747199

Parameter	Units	92454724010 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

SAMPLE DUPLICATE: 2747199

Parameter	Units	92454724010 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	91	97			
4-Bromofluorobenzene (S)	%	96	96			
Toluene-d8 (S)	%	104	103			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

QC Batch: 512103 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92454724013, 92454724017

METHOD BLANK: 2746253 Matrix: Water
Associated Lab Samples: 92454724013, 92454724017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/27/19 12:27	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/27/19 12:27	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/27/19 12:27	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/27/19 12:27	
1,1-Dichloroethane	ug/L	ND	1.0	11/27/19 12:27	
1,1-Dichloroethene	ug/L	ND	1.0	11/27/19 12:27	
1,1-Dichloropropene	ug/L	ND	1.0	11/27/19 12:27	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/27/19 12:27	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/27/19 12:27	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/27/19 12:27	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	11/27/19 12:27	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/27/19 12:27	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/27/19 12:27	
1,2-Dichloroethane	ug/L	ND	1.0	11/27/19 12:27	
1,2-Dichloropropane	ug/L	ND	1.0	11/27/19 12:27	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/27/19 12:27	
1,3-Dichloropropane	ug/L	ND	1.0	11/27/19 12:27	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/27/19 12:27	
2,2-Dichloropropane	ug/L	ND	1.0	11/27/19 12:27	
2-Butanone (MEK)	ug/L	ND	5.0	11/27/19 12:27	
2-Chlorotoluene	ug/L	ND	1.0	11/27/19 12:27	
2-Hexanone	ug/L	ND	5.0	11/27/19 12:27	
4-Chlorotoluene	ug/L	ND	1.0	11/27/19 12:27	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/27/19 12:27	
Acetone	ug/L	ND	25.0	11/27/19 12:27	
Benzene	ug/L	ND	1.0	11/27/19 12:27	
Bromobenzene	ug/L	ND	1.0	11/27/19 12:27	
Bromochloromethane	ug/L	ND	1.0	11/27/19 12:27	
Bromodichloromethane	ug/L	ND	1.0	11/27/19 12:27	
Bromoform	ug/L	ND	1.0	11/27/19 12:27	
Bromomethane	ug/L	ND	2.0	11/27/19 12:27	
Carbon tetrachloride	ug/L	ND	1.0	11/27/19 12:27	
Chlorobenzene	ug/L	ND	1.0	11/27/19 12:27	
Chloroethane	ug/L	ND	1.0	11/27/19 12:27	
Chloroform	ug/L	ND	5.0	11/27/19 12:27	
Chloromethane	ug/L	ND	1.0	11/27/19 12:27	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/27/19 12:27	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/27/19 12:27	
Dibromochloromethane	ug/L	ND	1.0	11/27/19 12:27	
Dibromomethane	ug/L	ND	1.0	11/27/19 12:27	
Dichlorodifluoromethane	ug/L	ND	1.0	11/27/19 12:27	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

METHOD BLANK: 2746253 Matrix: Water
Associated Lab Samples: 92454724013, 92454724017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	11/27/19 12:27	
Ethylbenzene	ug/L	ND	1.0	11/27/19 12:27	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/27/19 12:27	
m&p-Xylene	ug/L	ND	2.0	11/27/19 12:27	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/27/19 12:27	
Methylene Chloride	ug/L	ND	5.0	11/27/19 12:27	
Naphthalene	ug/L	ND	1.0	11/27/19 12:27	
o-Xylene	ug/L	ND	1.0	11/27/19 12:27	
p-Isopropyltoluene	ug/L	ND	1.0	11/27/19 12:27	
Styrene	ug/L	ND	1.0	11/27/19 12:27	
Tetrachloroethene	ug/L	ND	1.0	11/27/19 12:27	
Toluene	ug/L	ND	1.0	11/27/19 12:27	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/27/19 12:27	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/27/19 12:27	
Trichloroethene	ug/L	ND	1.0	11/27/19 12:27	
Trichlorofluoromethane	ug/L	ND	1.0	11/27/19 12:27	
Vinyl acetate	ug/L	ND	2.0	11/27/19 12:27	
Vinyl chloride	ug/L	ND	1.0	11/27/19 12:27	
Xylene (Total)	ug/L	ND	1.0	11/27/19 12:27	
1,2-Dichloroethane-d4 (S)	%	98	70-130	11/27/19 12:27	
4-Bromofluorobenzene (S)	%	107	70-130	11/27/19 12:27	
Toluene-d8 (S)	%	107	70-130	11/27/19 12:27	

LABORATORY CONTROL SAMPLE: 2746254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.0	106	70-130	
1,1,1-Trichloroethane	ug/L	50	52.7	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.2	102	70-130	
1,1,2-Trichloroethane	ug/L	50	53.7	107	70-130	
1,1-Dichloroethane	ug/L	50	51.7	103	70-130	
1,1-Dichloroethene	ug/L	50	56.3	113	70-130	
1,1-Dichloropropene	ug/L	50	58.4	117	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.2	100	70-130	
1,2,3-Trichloropropane	ug/L	50	52.2	104	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.9	100	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.1	96	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.8	106	70-130	
1,2-Dichlorobenzene	ug/L	50	49.7	99	70-130	
1,2-Dichloroethane	ug/L	50	50.8	102	70-130	
1,2-Dichloropropane	ug/L	50	53.8	108	70-130	
1,3-Dichlorobenzene	ug/L	50	49.2	98	70-130	
1,3-Dichloropropane	ug/L	50	56.2	112	70-131	
1,4-Dichlorobenzene	ug/L	50	49.0	98	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

LABORATORY CONTROL SAMPLE: 2746254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	52.3	105	69-130	
2-Butanone (MEK)	ug/L	100	108	108	64-135	
2-Chlorotoluene	ug/L	50	50.1	100	70-130	
2-Hexanone	ug/L	100	104	104	66-135	
4-Chlorotoluene	ug/L	50	50.4	101	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-130	
Acetone	ug/L	100	124	124	61-157	
Benzene	ug/L	50	52.7	105	70-130	
Bromobenzene	ug/L	50	49.5	99	70-130	
Bromochloromethane	ug/L	50	53.5	107	70-130	
Bromodichloromethane	ug/L	50	51.4	103	70-130	
Bromoform	ug/L	50	51.8	104	70-130	
Bromomethane	ug/L	50	37.3	75	38-130	
Carbon tetrachloride	ug/L	50	49.8	100	70-130	
Chlorobenzene	ug/L	50	49.5	99	70-130	
Chloroethane	ug/L	50	55.9	112	37-142	
Chloroform	ug/L	50	52.7	105	70-130	
Chloromethane	ug/L	50	57.3	115	48-130	
cis-1,2-Dichloroethene	ug/L	50	51.4	103	70-130	
cis-1,3-Dichloropropene	ug/L	50	57.7	115	70-130	
Dibromochloromethane	ug/L	50	53.8	108	70-130	
Dibromomethane	ug/L	50	46.3	93	70-130	
Dichlorodifluoromethane	ug/L	50	68.5	137	53-134	L1
Diisopropyl ether	ug/L	50	56.6	113	70-135	
Ethylbenzene	ug/L	50	49.2	98	70-130	
Hexachloro-1,3-butadiene	ug/L	50	50.8	102	68-132	
m&p-Xylene	ug/L	100	99.8	100	70-130	
Methyl-tert-butyl ether	ug/L	50	57.7	115	70-130	
Methylene Chloride	ug/L	50	52.1	104	67-132	
Naphthalene	ug/L	50	50.8	102	70-130	
o-Xylene	ug/L	50	49.9	100	70-130	
p-Isopropyltoluene	ug/L	50	49.8	100	70-130	
Styrene	ug/L	50	51.9	104	70-130	
Tetrachloroethene	ug/L	50	47.0	94	69-130	
Toluene	ug/L	50	48.5	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	53.9	108	70-130	
trans-1,3-Dichloropropene	ug/L	50	55.8	112	70-130	
Trichloroethene	ug/L	50	52.9	106	70-130	
Trichlorofluoromethane	ug/L	50	51.4	103	63-130	
Vinyl acetate	ug/L	100	110	110	55-143	
Vinyl chloride	ug/L	50	66.5	133	70-131	L1
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2746255 2746256

Parameter	Units	92454820011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	1.0 U	20	20	18.7	19.9	94	100	73-134	6	30	
1,1,1-Trichloroethane	ug/L	1.0 U	20	20	21.4	21.1	107	106	82-143	1	30	
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20	20	20.0	20.7	100	103	70-136	3	30	
1,1,2-Trichloroethane	ug/L	1.0 U	20	20	21.5	20.6	108	103	70-135	5	30	
1,1-Dichloroethane	ug/L	1.0 U	20	20	22.0	21.6	110	108	70-139	2	30	
1,1-Dichloroethene	ug/L	1.0 U	20	20	24.3	23.8	122	119	70-154	2	30	
1,1-Dichloropropene	ug/L	1.0 U	20	20	22.4	22.9	112	115	70-149	2	30	
1,2,3-Trichlorobenzene	ug/L	1.0 U	20	20	19.4	20.1	97	100	70-135	3	30	
1,2,3-Trichloropropane	ug/L	1.0 U	20	20	20.0	20.7	100	103	71-137	3	30	
1,2,4-Trichlorobenzene	ug/L	1.0 U	20	20	18.6	19.8	93	99	73-140	6	30	
1,2-Dibromo-3-chloropropane	ug/L	5.0 U	20	20	17.9	18.8	89	94	65-134	5	30	
1,2-Dibromoethane (EDB)	ug/L	1.0 U	20	20	20.0	20.6	100	103	70-137	3	30	
1,2-Dichlorobenzene	ug/L	1.0 U	20	20	19.6	20.5	98	103	70-133	4	30	
1,2-Dichloroethane	ug/L	1.0 U	20	20	20.7	20.5	103	103	70-137	1	30	
1,2-Dichloropropane	ug/L	1.0 U	20	20	22.3	21.4	112	107	70-140	4	30	
1,3-Dichlorobenzene	ug/L	1.0 U	20	20	19.8	19.8	99	99	70-135	0	30	
1,3-Dichloropropane	ug/L	1.0 U	20	20	21.2	21.9	106	110	70-143	3	30	
1,4-Dichlorobenzene	ug/L	1.0 U	20	20	20.1	19.5	101	97	70-133	3	30	
2,2-Dichloropropane	ug/L	1.0 U	20	20	19.8	19.7	99	99	61-148	0	30	
2-Butanone (MEK)	ug/L	5.0 U	40	40	35.7	39.8	89	99	60-139	11	30	
2-Chlorotoluene	ug/L	1.0 U	20	20	20.1	20.3	100	102	70-144	1	30	
2-Hexanone	ug/L	5.0 U	40	40	40.2	42.6	101	107	65-138	6	30	
4-Chlorotoluene	ug/L	1.0 U	20	20	20.3	20.6	102	103	70-137	1	30	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	40	40	39.8	42.0	100	105	65-135	5	30	
Acetone	ug/L	25.0 U	40	40	42.9	45.6	107	114	60-148	6	30	
Benzene	ug/L	1.0 U	20	20	22.6	21.6	113	108	70-151	4	30	
Bromobenzene	ug/L	1.0 U	20	20	20.0	20.0	100	100	70-136	0	30	
Bromochloromethane	ug/L	1.0 U	20	20	22.2	22.1	111	110	70-141	1	30	
Bromodichloromethane	ug/L	1.0 U	20	20	21.7	20.9	109	105	70-138	4	30	
Bromoform	ug/L	1.0 U	20	20	18.8	19.7	94	98	63-130	4	30	
Bromomethane	ug/L	2.0 U	20	20	17.1	18.5	86	92	15-152	8	30	
Carbon tetrachloride	ug/L	1.0 U	20	20	22.7	22.1	113	111	70-143	3	30	
Chlorobenzene	ug/L	1.0 U	20	20	20.6	20.7	103	104	70-138	1	30	
Chloroethane	ug/L	1.0 U	20	20	28.1	26.0	141	130	52-163	8	30	
Chloroform	ug/L	5.0 U	20	20	21.6	21.8	108	109	70-139	1	30	
Chloromethane	ug/L	1.0 U	20	20	24.2	24.1	121	120	41-139	1	30	
cis-1,2-Dichloroethene	ug/L	1.0 U	20	20	21.4	21.5	107	107	70-141	0	30	
cis-1,3-Dichloropropene	ug/L	1.0 U	20	20	21.0	21.1	105	105	70-137	0	30	
Dibromochloromethane	ug/L	1.0 U	20	20	19.0	19.7	95	98	70-134	3	30	
Dibromomethane	ug/L	1.0 U	20	20	20.4	19.3	102	97	70-138	5	30	
Dichlorodifluoromethane	ug/L	1.0 U	20	20	28.2	28.2	141	141	47-155	0	30	
Diisopropyl ether	ug/L	1.0 U	20	20	20.6	21.9	103	109	63-144	6	30	
Ethylbenzene	ug/L	1.0 U	20	20	20.5	20.7	102	104	66-153	1	30	
Hexachloro-1,3-butadiene	ug/L	1.0 U	20	20	18.6	18.1	93	91	65-149	3	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2746255 2746256

Parameter	Units	92454820011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	2.0 U	40	40	42.3	42.8	106	107	69-152	1	30	
Methyl-tert-butyl ether	ug/L	1.0 U	20	20	20.1	21.2	100	106	54-156	5	30	
Methylene Chloride	ug/L	5.0 U	20	20	23.6	23.0	118	115	42-159	3	30	
Naphthalene	ug/L	1.0 U	20	20	18.8	19.5	94	98	61-148	4	30	
o-Xylene	ug/L	1.0 U	20	20	20.3	20.5	101	103	70-148	1	30	
p-Isopropyltoluene	ug/L	1.0 U	20	20	19.3	19.8	97	99	70-146	2	30	
Styrene	ug/L	1.0 U	20	20	20.4	20.9	102	104	70-135	2	30	
Tetrachloroethene	ug/L	1.0 U	20	20	19.2	19.0	96	95	59-143	1	30	
Toluene	ug/L	1.0 U	20	20	21.3	20.7	106	103	59-148	3	30	
trans-1,2-Dichloroethene	ug/L	1.0 U	20	20	22.5	22.2	113	111	70-146	2	30	
trans-1,3-Dichloropropene	ug/L	1.0 U	20	20	20.7	21.3	104	107	70-135	3	30	
Trichloroethene	ug/L	1.8	20	20	23.9	23.3	111	108	70-147	3	30	
Trichlorofluoromethane	ug/L	1.0 U	20	20	23.1	22.5	115	113	70-148	2	30	
Vinyl acetate	ug/L	2.0 U	40	40	34.4	35.4	86	88	49-151	3	30	
Vinyl chloride	ug/L	1.0 U	20	20	26.5	26.4	133	132	70-156	0	30	
Xylene (Total)	ug/L	1.0 U	60	60	62.6	63.3	104	106	63-158	1	30	
1,2-Dichloroethane-d4 (S)	%						104	107	70-130			
4-Bromofluorobenzene (S)	%						101	103	70-130			
Toluene-d8 (S)	%						103	101	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

QC Batch: 512363 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92454724018

METHOD BLANK: 2747429 Matrix: Water
Associated Lab Samples: 92454724018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	12/02/19 12:07	
1,1,1-Trichloroethane	ug/L	ND	1.0	12/02/19 12:07	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/02/19 12:07	
1,1,2-Trichloroethane	ug/L	ND	1.0	12/02/19 12:07	
1,1-Dichloroethane	ug/L	ND	1.0	12/02/19 12:07	
1,1-Dichloroethene	ug/L	ND	1.0	12/02/19 12:07	
1,1-Dichloropropene	ug/L	ND	1.0	12/02/19 12:07	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	12/02/19 12:07	
1,2,3-Trichloropropane	ug/L	ND	1.0	12/02/19 12:07	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	12/02/19 12:07	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	12/02/19 12:07	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	12/02/19 12:07	
1,2-Dichlorobenzene	ug/L	ND	1.0	12/02/19 12:07	
1,2-Dichloroethane	ug/L	ND	1.0	12/02/19 12:07	
1,2-Dichloropropane	ug/L	ND	1.0	12/02/19 12:07	
1,3-Dichlorobenzene	ug/L	ND	1.0	12/02/19 12:07	
1,3-Dichloropropane	ug/L	ND	1.0	12/02/19 12:07	
1,4-Dichlorobenzene	ug/L	ND	1.0	12/02/19 12:07	
2,2-Dichloropropane	ug/L	ND	1.0	12/02/19 12:07	
2-Butanone (MEK)	ug/L	ND	5.0	12/02/19 12:07	
2-Chlorotoluene	ug/L	ND	1.0	12/02/19 12:07	
2-Hexanone	ug/L	ND	5.0	12/02/19 12:07	
4-Chlorotoluene	ug/L	ND	1.0	12/02/19 12:07	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	12/02/19 12:07	
Acetone	ug/L	ND	25.0	12/02/19 12:07	
Benzene	ug/L	ND	1.0	12/02/19 12:07	
Bromobenzene	ug/L	ND	1.0	12/02/19 12:07	
Bromochloromethane	ug/L	ND	1.0	12/02/19 12:07	
Bromodichloromethane	ug/L	ND	1.0	12/02/19 12:07	
Bromoform	ug/L	ND	1.0	12/02/19 12:07	
Bromomethane	ug/L	ND	2.0	12/02/19 12:07	
Carbon tetrachloride	ug/L	ND	1.0	12/02/19 12:07	
Chlorobenzene	ug/L	ND	1.0	12/02/19 12:07	
Chloroethane	ug/L	ND	1.0	12/02/19 12:07	
Chloroform	ug/L	ND	5.0	12/02/19 12:07	
Chloromethane	ug/L	ND	1.0	12/02/19 12:07	
cis-1,2-Dichloroethene	ug/L	ND	1.0	12/02/19 12:07	
cis-1,3-Dichloropropene	ug/L	ND	1.0	12/02/19 12:07	
Dibromochloromethane	ug/L	ND	1.0	12/02/19 12:07	
Dibromomethane	ug/L	ND	1.0	12/02/19 12:07	
Dichlorodifluoromethane	ug/L	ND	1.0	12/02/19 12:07	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

METHOD BLANK: 2747429 Matrix: Water
Associated Lab Samples: 92454724018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	12/02/19 12:07	
Ethylbenzene	ug/L	ND	1.0	12/02/19 12:07	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	12/02/19 12:07	
m&p-Xylene	ug/L	ND	2.0	12/02/19 12:07	
Methyl-tert-butyl ether	ug/L	ND	1.0	12/02/19 12:07	
Methylene Chloride	ug/L	ND	5.0	12/02/19 12:07	
Naphthalene	ug/L	ND	1.0	12/02/19 12:07	
o-Xylene	ug/L	ND	1.0	12/02/19 12:07	
p-Isopropyltoluene	ug/L	ND	1.0	12/02/19 12:07	
Styrene	ug/L	ND	1.0	12/02/19 12:07	
Tetrachloroethene	ug/L	ND	1.0	12/02/19 12:07	
Toluene	ug/L	ND	1.0	12/02/19 12:07	
trans-1,2-Dichloroethene	ug/L	ND	1.0	12/02/19 12:07	
trans-1,3-Dichloropropene	ug/L	ND	1.0	12/02/19 12:07	
Trichloroethene	ug/L	ND	1.0	12/02/19 12:07	
Trichlorofluoromethane	ug/L	ND	1.0	12/02/19 12:07	
Vinyl acetate	ug/L	ND	2.0	12/02/19 12:07	
Vinyl chloride	ug/L	ND	1.0	12/02/19 12:07	
Xylene (Total)	ug/L	ND	1.0	12/02/19 12:07	
1,2-Dichloroethane-d4 (S)	%	103	70-130	12/02/19 12:07	
4-Bromofluorobenzene (S)	%	106	70-130	12/02/19 12:07	
Toluene-d8 (S)	%	109	70-130	12/02/19 12:07	

LABORATORY CONTROL SAMPLE: 2747430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.1	106	70-130	
1,1,1-Trichloroethane	ug/L	50	53.0	106	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.0	104	70-130	
1,1,2-Trichloroethane	ug/L	50	53.3	107	70-130	
1,1-Dichloroethane	ug/L	50	51.6	103	70-130	
1,1-Dichloroethene	ug/L	50	57.1	114	70-130	
1,1-Dichloropropene	ug/L	50	59.0	118	70-130	
1,2,3-Trichlorobenzene	ug/L	50	51.7	103	70-130	
1,2,3-Trichloropropane	ug/L	50	54.1	108	70-130	
1,2,4-Trichlorobenzene	ug/L	50	51.4	103	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.3	103	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.8	106	70-130	
1,2-Dichlorobenzene	ug/L	50	50.1	100	70-130	
1,2-Dichloroethane	ug/L	50	51.3	103	70-130	
1,2-Dichloropropane	ug/L	50	52.6	105	70-130	
1,3-Dichlorobenzene	ug/L	50	48.8	98	70-130	
1,3-Dichloropropane	ug/L	50	55.4	111	70-131	
1,4-Dichlorobenzene	ug/L	50	49.5	99	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

LABORATORY CONTROL SAMPLE: 2747430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	55.0	110	69-130	
2-Butanone (MEK)	ug/L	100	113	113	64-135	
2-Chlorotoluene	ug/L	50	49.6	99	70-130	
2-Hexanone	ug/L	100	106	106	66-135	
4-Chlorotoluene	ug/L	50	50.8	102	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	70-130	
Acetone	ug/L	100	128	128	61-157	
Benzene	ug/L	50	52.4	105	70-130	
Bromobenzene	ug/L	50	48.5	97	70-130	
Bromochloromethane	ug/L	50	53.9	108	70-130	
Bromodichloromethane	ug/L	50	52.1	104	70-130	
Bromoform	ug/L	50	54.0	108	70-130	
Bromomethane	ug/L	50	57.7	115	38-130	
Carbon tetrachloride	ug/L	50	51.3	103	70-130	
Chlorobenzene	ug/L	50	48.3	97	70-130	
Chloroethane	ug/L	50	54.2	108	37-142	
Chloroform	ug/L	50	52.1	104	70-130	
Chloromethane	ug/L	50	58.8	118	48-130	
cis-1,2-Dichloroethene	ug/L	50	51.2	102	70-130	
cis-1,3-Dichloropropene	ug/L	50	57.2	114	70-130	
Dibromochloromethane	ug/L	50	53.2	106	70-130	
Dibromomethane	ug/L	50	46.7	93	70-130	
Dichlorodifluoromethane	ug/L	50	71.2	142	53-134	L1
Diisopropyl ether	ug/L	50	58.1	116	70-135	
Ethylbenzene	ug/L	50	48.4	97	70-130	
Hexachloro-1,3-butadiene	ug/L	50	48.4	97	68-132	
m&p-Xylene	ug/L	100	98.5	98	70-130	
Methyl-tert-butyl ether	ug/L	50	59.0	118	70-130	
Methylene Chloride	ug/L	50	54.0	108	67-132	
Naphthalene	ug/L	50	51.0	102	70-130	
o-Xylene	ug/L	50	46.9	94	70-130	
p-Isopropyltoluene	ug/L	50	49.6	99	70-130	
Styrene	ug/L	50	50.1	100	70-130	
Tetrachloroethene	ug/L	50	46.8	94	69-130	
Toluene	ug/L	50	48.2	96	70-130	
trans-1,2-Dichloroethene	ug/L	50	53.7	107	70-130	
trans-1,3-Dichloropropene	ug/L	50	57.6	115	70-130	
Trichloroethene	ug/L	50	51.8	104	70-130	
Trichlorofluoromethane	ug/L	50	51.2	102	63-130	
Vinyl acetate	ug/L	100	104	104	55-143	
Vinyl chloride	ug/L	50	66.6	133	70-131	L1
Xylene (Total)	ug/L	150	145	97	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2747431 2747432

Parameter	Units	92454724018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	100	100	103	107	103	107	73-134	3	30	
1,1,1-Trichloroethane	ug/L	10.0	100	100	127	123	117	113	82-143	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	100	100	106	105	106	105	70-136	0	30	
1,1,2-Trichloroethane	ug/L	ND	100	100	107	109	107	109	70-135	2	30	
1,1-Dichloroethane	ug/L	54.5	100	100	164	164	110	110	70-139	0	30	
1,1-Dichloroethene	ug/L	868	100	100	1110	1100	238	233	70-154	0	30	E,M1
1,1-Dichloropropene	ug/L	ND	100	100	119	118	119	118	70-149	0	30	
1,2,3-Trichlorobenzene	ug/L	ND	100	100	101	100	101	100	70-135	1	30	
1,2,3-Trichloropropane	ug/L	ND	100	100	105	109	105	109	71-137	3	30	
1,2,4-Trichlorobenzene	ug/L	ND	100	100	92.7	97.8	93	98	73-140	5	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	100	100	97.2	94.7	97	95	65-134	3	30	
1,2-Dibromoethane (EDB)	ug/L	ND	100	100	100	104	100	104	70-137	3	30	
1,2-Dichlorobenzene	ug/L	ND	100	100	104	102	104	102	70-133	2	30	
1,2-Dichloroethane	ug/L	6.6	100	100	112	115	105	108	70-137	2	30	
1,2-Dichloropropane	ug/L	ND	100	100	112	112	112	112	70-140	0	30	
1,3-Dichlorobenzene	ug/L	ND	100	100	101	100	101	100	70-135	1	30	
1,3-Dichloropropane	ug/L	ND	100	100	109	109	109	109	70-143	1	30	
1,4-Dichlorobenzene	ug/L	ND	100	100	103	101	103	101	70-133	2	30	
2,2-Dichloropropane	ug/L	ND	100	100	103	101	103	101	61-148	1	30	
2-Butanone (MEK)	ug/L	ND	200	200	192	197	96	98	60-139	2	30	
2-Chlorotoluene	ug/L	ND	100	100	104	104	104	104	70-144	0	30	
2-Hexanone	ug/L	ND	200	200	213	215	107	107	65-138	1	30	
4-Chlorotoluene	ug/L	ND	100	100	109	104	109	104	70-137	5	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	200	200	211	211	105	106	65-135	0	30	
Acetone	ug/L	ND	200	200	225	226	112	113	60-148	1	30	
Benzene	ug/L	ND	100	100	119	116	119	116	70-151	3	30	
Bromobenzene	ug/L	ND	100	100	103	102	103	102	70-136	1	30	
Bromochloromethane	ug/L	ND	100	100	112	114	112	114	70-141	2	30	
Bromodichloromethane	ug/L	ND	100	100	115	109	115	109	70-138	5	30	
Bromoform	ug/L	ND	100	100	97.1	103	97	103	63-130	6	30	
Bromomethane	ug/L	ND	100	100	121	124	121	124	15-152	2	30	
Carbon tetrachloride	ug/L	ND	100	100	115	115	115	115	70-143	0	30	
Chlorobenzene	ug/L	ND	100	100	105	102	105	102	70-138	3	30	
Chloroethane	ug/L	ND	100	100	140	139	140	139	52-163	1	30	
Chloroform	ug/L	ND	100	100	113	115	113	115	70-139	2	30	
Chloromethane	ug/L	ND	100	100	132	131	132	131	41-139	1	30	
cis-1,2-Dichloroethene	ug/L	ND	100	100	115	115	111	111	70-141	0	30	
cis-1,3-Dichloropropene	ug/L	ND	100	100	114	109	114	109	70-137	4	30	
Dibromochloromethane	ug/L	ND	100	100	99.2	102	99	102	70-134	3	30	
Dibromomethane	ug/L	ND	100	100	103	103	103	103	70-138	0	30	
Dichlorodifluoromethane	ug/L	ND	100	100	155	156	155	156	47-155	1	30	M0
Diisopropyl ether	ug/L	ND	100	100	111	112	111	112	63-144	0	30	
Ethylbenzene	ug/L	ND	100	100	109	108	109	108	66-153	0	30	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	93.7	98.7	94	99	65-149	5	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2747431 2747432

Parameter	Units	92454724018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	ND	200	200	217	219	108	109	69-152	1	30	
Methyl-tert-butyl ether	ug/L	ND	100	100	108	110	108	110	54-156	2	30	
Methylene Chloride	ug/L	ND	100	100	122	125	116	119	42-159	2	30	
Naphthalene	ug/L	ND	100	100	101	98.6	101	99	61-148	3	30	
o-Xylene	ug/L	ND	100	100	105	107	105	107	70-148	1	30	
p-Isopropyltoluene	ug/L	ND	100	100	104	102	104	102	70-146	1	30	
Styrene	ug/L	ND	100	100	106	108	106	108	70-135	2	30	
Tetrachloroethene	ug/L	ND	100	100	100	99.1	100	99	59-143	1	30	
Toluene	ug/L	ND	100	100	108	107	108	107	59-148	1	30	
trans-1,2-Dichloroethene	ug/L	ND	100	100	117	115	117	115	70-146	2	30	
trans-1,3-Dichloropropene	ug/L	ND	100	100	111	110	111	110	70-135	1	30	
Trichloroethene	ug/L	6.0	100	100	118	122	112	116	70-147	3	30	
Trichlorofluoromethane	ug/L	ND	100	100	121	120	121	120	70-148	1	30	
Vinyl acetate	ug/L	ND	200	200	184	187	92	94	49-151	2	30	
Vinyl chloride	ug/L	ND	100	100	145	143	145	143	70-156	1	30	
Xylene (Total)	ug/L	ND	300	300	322	325	107	108	63-158	1	30	
1,2-Dichloroethane-d4 (S)	%						103	107	70-130			
4-Bromofluorobenzene (S)	%						101	103	70-130			
Toluene-d8 (S)	%						101	99	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
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QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

QC Batch: 511330 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92454724001, 92454724002

METHOD BLANK: 2743111 Matrix: Water
Associated Lab Samples: 92454724001, 92454724002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	11/22/19 18:58	
1,2-Dichloroethane-d4 (S)	%	97	50-150	11/22/19 18:58	
Toluene-d8 (S)	%	102	50-150	11/22/19 18:58	

LABORATORY CONTROL SAMPLE: 2743112

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	18.2	91	70-130	
1,2-Dichloroethane-d4 (S)	%			96	50-150	
Toluene-d8 (S)	%			104	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2743113 2743114

Parameter	Units	92454724002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	18.1	19.0	87	92	50-150	5	30	
1,2-Dichloroethane-d4 (S)	%						89	96	50-150		30	
Toluene-d8 (S)	%						87	90	50-150		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

QC Batch: 511423 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92454724003, 92454724004, 92454724005, 92454724006, 92454724007, 92454724008, 92454724009, 92454724010, 92454724011, 92454724012, 92454724013, 92454724014, 92454724015, 92454724018

METHOD BLANK: 2743467 Matrix: Water
Associated Lab Samples: 92454724003, 92454724004, 92454724005, 92454724006, 92454724007, 92454724008, 92454724009, 92454724010, 92454724011, 92454724012, 92454724013, 92454724014, 92454724015, 92454724018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	11/23/19 19:03	
1,2-Dichloroethane-d4 (S)	%	97	50-150	11/23/19 19:03	
Toluene-d8 (S)	%	108	50-150	11/23/19 19:03	

LABORATORY CONTROL SAMPLE: 2743468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	19.9	99	70-130	
1,2-Dichloroethane-d4 (S)	%			96	50-150	
Toluene-d8 (S)	%			108	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2743469 2743470

Parameter	Units	92454724003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	20.3	19.9	99	97	50-150	2	30	
1,2-Dichloroethane-d4 (S)	%						109	103	50-150		30	
Toluene-d8 (S)	%						108	108	50-150		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

QC Batch: 511490 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92454724016, 92454724017

METHOD BLANK: 2743623 Matrix: Water
Associated Lab Samples: 92454724016, 92454724017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	11/24/19 12:16	
1,2-Dichloroethane-d4 (S)	%	100	50-150	11/24/19 12:16	
Toluene-d8 (S)	%	94	50-150	11/24/19 12:16	

LABORATORY CONTROL SAMPLE: 2743624

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	20.3	101	70-130	
1,2-Dichloroethane-d4 (S)	%			102	50-150	
Toluene-d8 (S)	%			94	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2743625 2743626

Parameter	Units	92454724017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	20	19.8	21.8	95	105	50-150	10	30	
1,2-Dichloroethane-d4 (S)	%						109	107	50-150		30	
Toluene-d8 (S)	%						91	91	50-150		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Former Kop Flex Offsite #1
Pace Project No.: 92454724

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92454724001	MW-33D-295	EPA 8260B	511941		
92454724002	MW-33D-235	EPA 8260B	511941		
92454724003	MW-35D	EPA 8260B	511941		
92454724004	MW-30D-413	EPA 8260B	511941		
92454724005	MW-30D-273	EPA 8260B	511970		
92454724006	MW-29D	EPA 8260B	511941		
92454724007	MW-32D	EPA 8260B	511941		
92454724008	MW-36D	EPA 8260B	511970		
92454724009	MW-28D	EPA 8260B	511970		
92454724010	MW-31D	EPA 8260B	511970		
92454724011	MW-34D	EPA 8260B	511970		
92454724012	TRIP BLANK	EPA 8260B	511970		
92454724013	DUP 111919B	EPA 8260B	512103		
92454724014	MW-25D-130	EPA 8260B	511970		
92454724015	MW-25D-192	EPA 8260B	511970		
92454724016	MW-46D	EPA 8260B	511970		
92454724017	MW-45	EPA 8260B	512103		
92454724018	MW-24D	EPA 8260B	512363		
92454724001	MW-33D-295	EPA 8260B Mod.	511330		
92454724002	MW-33D-235	EPA 8260B Mod.	511330		
92454724003	MW-35D	EPA 8260B Mod.	511423		
92454724004	MW-30D-413	EPA 8260B Mod.	511423		
92454724005	MW-30D-273	EPA 8260B Mod.	511423		
92454724006	MW-29D	EPA 8260B Mod.	511423		
92454724007	MW-32D	EPA 8260B Mod.	511423		
92454724008	MW-36D	EPA 8260B Mod.	511423		
92454724009	MW-28D	EPA 8260B Mod.	511423		
92454724010	MW-31D	EPA 8260B Mod.	511423		
92454724011	MW-34D	EPA 8260B Mod.	511423		
92454724012	TRIP BLANK	EPA 8260B Mod.	511423		
92454724013	DUP 111919B	EPA 8260B Mod.	511423		
92454724014	MW-25D-130	EPA 8260B Mod.	511423		
92454724015	MW-25D-192	EPA 8260B Mod.	511423		
92454724016	MW-46D	EPA 8260B Mod.	511490		
92454724017	MW-45	EPA 8260B Mod.	511490		
92454724018	MW-24D	EPA 8260B Mod.	511423		

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

WO# : 92454724

92454724

Sample Condition Upon Receipt

Client Name: WSP

Project #:

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

Custody Seal Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No

Date/Initials Person Examining Contents: YCO 11/24/19

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

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 92T058 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp (°C): 3.2, 1.4 **Correction Factor:** Add/Subtract (°C) 0.0°C

Cooler Temp Corrected (°C): 3.2, 1.4

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☑ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☑ No	☐ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☑ No	☐ N/A	10.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY **Field Data Required?** ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: TR Date: 11/22

Project Manager SRF Review: TR Date: 11/22

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # **WO# : 92454724**

PM: PTE Due Date: 12/02/19

CLIENT: 92-WSP

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1																6											
2																6											
3																6											
4																6											
5																6											
6																6											
7																6											
8																6											
9																6											
10																6											
11																6											
12																4											

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Offsite #1

Page : 1 Of 2

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: WSP	Report To: Cresci, Chris	Attention: accounts.payable@wsp.com	
Address: 13530 Dulles Technology Drive	Copy To:	Company Name:	Regulatory Agency
Suite 300, Herndon, VA 20171		Address:	
Email:	Purchase Order #:	Pace Quote:	
Phone: 703 709 6500 Fax	Project Name: Former Kop-Flex Facility	Pace Project Manager: taylor.ezell@pacelabs.com,	State / Location
Requested Due Date: Standard TAT	Project #: 340154.011	Pace Profile #: 4362-1	MD

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOC by 8260 & 8260SIM	Trip BLANK	Residual Chlorine (Y/N)	32454724
1	MW-33D-295	WT	G	11/20/19		08	40		6				X						X			001
2	MW-33D-235	"	"	"		08	55		6				X						X			002
3	MW-35D	"	"	"		09	20		6				X						X			003
4	MW-30D-413	"	"	"		09	45		6				X						X			004
5	MW-30D-273	"	"	"		09	55		6				X						X			005
6	MW-29D	"	"	"		10	10		6				X						X			006
7	MW-32D	"	"	"		10	30		6				X						X			007
8	MW-36D	"	"	"		10	50		6				X						X			008
9	MW-28D	"	"	"		11	05		6				X						X			009
10	MW-31D	"	"	"		11	25		6				X						X			010
11	MW-34D	"	"	"		11	45		6				X						X			011
12	Trip Blank	"	"	lab provided					4				X						X	X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	WSP	11/20/19	1400	FedEx						
				PACE	11/21/19	932	3.2 L.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Molly Gray

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/20/19

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

offsite #'s

Page : 2 Of 2

Section A
Required Client Information:

Company:	WSP
Address:	13530 Dulles Technology Drive
Suite 300, Herndon, VA 20171	
Email:	
Phone:	Fax
Requested Due Date:	Standard TAT

Section B
Required Project Information:

Report To:	Cresci, Chris
Copy To:	
Purchase Order #:	
Project Name:	Former Kop-Flex Facility
Project #:	3140154501

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	taylor.ezell@pacelabs.com,
Pace Profile #:	4362-1

Regulatory Agency

State / Location: MD

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOC by 8260 & 8260SIM	Trip BLANK	Residual Chlorine (Y/N)	
1	~~DUP111919A~~																					
2	DUP111919B	WT	G	11/19	lab provided	09	00		4				X									9454724
3	MW-25D-130					16	00		6				X					X				
4	MW-25D-192					16	15		6				X					X				
5	MW-46D					12	25		6				X					X				
6	MW-45					12	35		6				X					X				
7	MW-24D					12	55		6				X					X				
8																						
9																						
10																						
11																						
12																						

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	WSP	11/20/19	1400	Fedex		
				PACE	11/21/19	932

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
3.2 2.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Molly Ley

SIGNATURE of SAMPLER: [signature]

DATE Signed: 11/20/19

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

WO# : 92454724

92454724

Sample Condition Upon Receipt

Client Name: WSP **Project #:**

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

Custody Seal Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No

Date/Initials Person Examining Contents: YCO 11/21/19

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

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 92T058 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp (°C): 3.2, 1.4 **Correction Factor:** Add/Subtract (°C) 0.0°C

Cooler Temp Corrected (°C): 3.2, 1.4

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☑ No	☐ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☑ No	☐ N/A	10.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: TD Date: 11/22

Project Manager SRF Review: TD Date: 11/22

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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Offsite #1

Page : 1 Of 2

Section A — Required Client Information:

Company: WSP
Address: 13530 Dulles Technology Drive
Suite 300, Herndon, VA 20171
Email:
Phone: 703 709 6500 Fax:
Requested Due Date: Standard TAT

Section B — Required Project Information:

Report To: Cresci, Chris
Copy To:
Purchase Order #:
Project Name: Former Kop-Flex Facility
Project #: 3401545.011

Section C — Invoice Information:

Attention: accounts.payable@wsp.com
Company Name:
Address:
Pace Quote:
Pace Project Manager: taylor.ezell@pacelabs.com,
Pace Profile #: 4362-1

Regulatory Agency:
State / Location: MD

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): VOC by 8260 & 8260SIM	Trip BLANK	Residual Chlorine (Y/N)	
1	MW-33D-295	WT	G	11/20/19		08	40		6				X						X			92454724	01
2	MW-33D-235					08	55		6				X						X				02
3	MW-35D					09	20		6				X						X				03
4	MW-30D-413					09	45		6				X						X				04
5	MW-30D-273					09	55		6				X						X				05
6	MW-29D					10	10		6				X						X				06
7	MW-32D					10	30		6				X						X				07
8	MW-36D					10	50		6				X						X				08
9	MW-28D					11	05		6				X						X				09
10	MW-31D					11	25		6				X						X				10
11	MW-34D					11	45		6				X						X				11
12	Trip Blank			lab provided					4				X						X	X			12

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	WSP	11/20/19	1400	Fedex						
				PACE	11/21/19	932	3.2 1.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Molly Gray

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/20/19

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

offsite #2

Page : 2 Of 2

Section A – Required Client Information:	Section B – Required Project Information:	Section C – Invoice Information:
Company: WSP	Report To: Cresci, Chris	Attention:
Address: 13530 Dulles Technology Drive	Copy To:	Company Name:
Suite 300, Herndon, VA 20171		Address:
Email:	Purchase Order #:	Pace Quote:
Phone: Fax	Project Name: Former Kop-Flex Facility	Pace Project Manager: taylor.ezell@pacelabs.com,
Requested Due Date: Standard TAT	Project #: 31401545.011	Pace Profile #: 4362-1

Regulatory Agency

State / Location: MD

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOC by 8260 & 8260SIM	Trip BLANK	Residual Chlorine (Y/N)	
1	~~DUP111919A~~				Lab provided				4				X									9454724
2	DUP111919B	W	G	11/19	09	09	00		6				X						X			
3	MW-25D-130					16	00		6				X						X			CP3
4	MW-25D-192					16	15		6				X						X			CP4
5	MW-46D					12	25		6				X						X			CP5
6	MW-45					12	35		6				X						X			CP6
7	MW-24D					12	55		6				X						X			CP7
8																						CP8
9																						
10																						
11																						
12																						

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	WSP	11/20/19	1400	Fedex						
				PACE	11/21/19	932	3.2 2.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Molly Ley

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/20/19

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

Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # WO# : 92454724

PM: PTE Due Date: 12/02/19

CLIENT: 92-WSP

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	\				\	\	\	\			\		\	\	\	6								\	\			
2	\				\	\	\	\			\		\	\	\	6								\	\			
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12	\				\	\	\	\			\		\	\	\									\	\			

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # **WO# : 92454724**

PM: PTE Due Date: 12/02/19

CLIENT: 92-WSP

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	\				\	\	\	\			\		\	\	\	6									\	\		
2	\				\	\	\	\			\		\	\	\	6									\	\		
3	\				\	\	\	\			\		\	\	\	6									\	\		
4	\				\	\	\	\			\		\	\	\	6									\	\		
5	\				\	\	\	\			\		\	\	\	6									\	\		
6	\				\	\	\	\			\		\	\	\	6									\	\		
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10	\				\	\	\	\			\		\	\	\	6									\	\		
11	\				\	\	\	\			\		\	\	\	6									\	\		
12	\				\	\	\	\			\		\	\	\	4									\	\		

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

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Web: www.microbe.com

SITE LOGIC Report

^{14}C-1,4-Dioxane Cometabolic Assay

Contact: Pam Groff Robertson
Phone: 703-318-3958
Address: WSP
13530 Dulles Technology Dr.
Suite 300
Herndon, VA 20171
Email: pam.robertson@wsp.com

MI Identifier: 001QH
Report Date: April 22, 2020

Project: Former Kop-Flex Facility, 31401545.011-06
Comments: Addendum

Executive Summary

The 1,4-dioxane concentrations in the Former Kop-Flex Facility microcosms were measured again after ~7-8 months of incubation. This was done by Clemson's standard GC/FID method. The results are shown in Table 1 along with a *t*-test to determine if there has been a statistically significant decrease since the previous sample (day 42); none were significant. These results are consistent with the ^{14}C results reported on October 22, 2019.

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Results

Table 1. Summary of 1,4-Dioxane Concentrations in Microcosms.

		Last 1,4-Dioxane Measurement (ppb) Day 42		Current 1,4-Dioxane Measurement (ppb) Day ~201-237			
MI ID	Sample ID	Average	Standard Deviation	Average	Standard Deviation	ABS (t)	Significant?
001QH-1	MW-24D	505	62.9	517	21.5	-0.314	No
001QH-2	MW-25D-130	362	227.1	420	17.9	-0.439	No
001QH-3	MW-25D-192	134	58.3	93	3.5	1.218	No
001QH-4	MW-30D-273	98	5.7	107	8.1	-1.701	No
001QH-5	MW-33D-295	121	15.1	102	24.8	1.139	No

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SITE LOGIC Report

^{14}C-1,4-Dioxane Cometabolic Assay

Contact: Pam Groff Robertson
Phone: 703-318-3958
Address: WSP
13530 Dulles Technology Dr.
Suite 300
Herndon, VA 20171
Email: pam.robertson@wsp.com

MI Identifier: 001QH
Report Date: October 22, 2019

Project: Former Kop-Flex Facility, 31401545.011-06

Comments:

Executive Summary

Groundwater samples were submitted to Clemson University for the ^{14}C-1,4-dioxane cometabolism package where assays were conducted using ^{14}C-labeled 1,4-dioxane and site groundwater to provide an estimated rate of aerobic cometabolic 1,4-dioxane degradation. A summary of the results is provided in Table 1. Following are key observations from the study.

1. Groundwater samples from five wells were evaluated in triplicate serum bottles, along with triplicate filter-sterilized groundwater (FSGW) controls for each well. Purified ^{14}C-1,4-dioxane was added to all bottles (~0.14 µCi/bottle). At time zero and at approximately one-week intervals for six weeks, aqueous samples were removed and analyzed for ^{14}C degradation products. The formation of products was fit to a mass balance model for total ^{14}C in the bottles in order to estimate pseudo-first order degradation rate constants. If the rate for the groundwater samples and the FSGW controls were both statistically significant, a net rate was calculated and evaluated for statistical significance.

Results are summarized in Table 1. None of the net degradation rate constants were statistically significant. The 95% confidence interval (CI) is also shown for each rate constant. For wells #1 and #4, the rate for the groundwater exceeded the rate in the FSGW, so that a net rate was calculated. However, the 95% CI for the net rate exceeds the rate itself, indicating the net rate is not different from zero. For wells #2, #3, and #5, the rate for the FSGW was higher than for the groundwater samples, so a net rate was not calculated.

Based on experience with other well samples analyzed as part of ESTCP project ER-201730, we are able to detect biodegradation rates at least as low as 0.0069 yr-1, corresponding to a half-life of 100 years. The majority of samples analyzed for that project have also shown no statistically significant activity.

For one of the sites evaluated for the ESTCP project, we observed the onset of 1,4-dioxane biodegradation several months after setting up the microcosms. The results for this well were negative after six weeks of incubation. For this reason, we will retain the WSP microcosms and check them for consumption of 1,4-dioxane based on GC/FID analysis after a similar length of additional incubation. In the event that an appreciable consumption of 1,4-dioxane is detected, we will also recheck the ^{14}C products.

2. In addition to following ^{14}C compounds, the total concentration of 1,4-dioxane was measured at time zero and after six weeks of incubation. 1,4-Dioxane was detected in groundwater from well #1 (418 µg/L) and #2 (313 µg/L). Adding the ^{14}C-1,4-dioxane increased the initial concentration of 1,4-dioxane in all of the bottles by ~99 µg/L. It should be noted that the gas chromatographic method used for total 1,4-dioxane has a relatively high detection limit of 25 µg/L; it is therefore possible that 1,4-dioxane was present in the groundwater samples from wells 3, 4 and 5, but at levels below 25 µg/L.

After six weeks of incubation, there was no statistically significant decrease in the total 1,4-dioxane concentration. The GC method used is not as sensitive as ^{14}C product detection, so the lack of statistically significant ^{14}C accumulation infers that there should be no discernable decrease in total 1,4-dioxane; that is what we observed.

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3. The concentration of VOCs in the groundwater in each serum bottle was measured. TCE, 1,1-DCE, cis-DCE, 1,2-DCA, and chloroethane were detected in at least one well sample, with a maximum concentration of 65 µg/L for 1,2-DCA in well #1. In general, VOC levels were lower in wells #4 and #5.

4. Oxygen levels were measured at the start and end of the six-week incubation period. A relatively small decrease in oxygen occurred, in excess of what could be attributed only to biodegradation of 1,4-dioxane. This suggested that some biodegradable compounds were present in addition to 1,4-dioxane.

5. The conditions of the assay do not fully reflect *in situ* conditions. By starting the assay with a headspace of air, the dissolved oxygen concentration was initially close to saturation. This indicates that oxygen was not likely a limiting factor in biodegradation of 1,4-dioxane, although it may be limiting *in situ*. Since soil was not included in the assay bottles, the population of 1,4-dioxane degrading microbes was underrepresented. Also, the absence of soil may contribute to a nutrient limitation.

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Results

Table 1. Summary of the ^{14}C-1,4-dioxane cometabolism assay results.

		k (yr^{-1})						Half Life (yr)		
MI ID	Sample ID	GW	GW 95% CI	FSGW	FSGW 95% CI	Net	Net 95% CI	Net	Net Lower	Net Upper
001QH-1	MW-24D	9.87E-03	2.26E-03	7.66E-03	3.44E-03	2.21E-03	3.99E-03	-	-	-
001QH-2	MW-25D-130	4.63E-04	7.71E-04	5.48E-03	2.74E-03	0	-	-	-	-
001QH-3	MW-25D-192	7.39E-03	2.40E-03	7.73E-03	3.64E-03	0	-	-	-	-
001QH-4	MW-30D-273	8.07E-03	4.37E-03	7.50E-03	3.60E-03	5.75E-04	5.49E-03	-	-	-
001QH-5	MW-33D-295	8.57E-03	5.46E-03	1.19E-02	7.05E-03	0	-	-	-	-

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CHAIN-OF-CUSTODY RECORD

No. 009961

wsp

WSP USA Office Address	13530 Rolles Technology Dr. Suite 300 Herndon, VA
Project Name	Kop-Flex
WSP USA Contact Name	Pam Robertson
Project Location	Hanover, MD
WSP USA Contact E-mail	Pam.Robertson@wsp.com
Project Number & Task	31401545.011 106
WSP USA Contact Phone	703-709-6500
Sampler(s) Name(s)	Chris Oresq, Shannon Burrell
Sampler(s) Signature(s)	
Laboratory Name & Location	Microbial Insights
Laboratory Project Manager	Kate Clark
Requested Turn-Around-Time	[X] Standard [ ] 24 HR [ ] 48 HR [ ] 72 HR [ ] ___ HR

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	SMO	PDO (Propane Monooxygenase)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	Sample Comments
MW-24D	GW	8/7/19		1030		1	X	X	X	X	001QH1
MW-30D-273	GW	8/7/19		1530		1	X	X	X	X	4

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
				8/8/19	930		
Relinquished By (Signature)	**Date**	**Time**	**Received By (Signature)**	**Date**	**Time**	**Number of Packages**	**Custody Seal Number(s)**

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

REPORT TO:
Reports will be provided to the contact(s) listed below. Parties other than the contact(s) listed below will require prior approval.

Name: Kate Clark
Company: Microbial Insights
Address: 10515 Research Dr.
Knoxville, TN 37931

email: kclark@microbe.com
Phone: 865-573-8188 ext. 100
Fax:

Project Manager: Kate Clark
Project Name:
Project No.: 001QH

INVOICE TO:
For invoices paid by a third party it is imperative that contact information & corresponding reference No. be provided.

Name: Matthew Ellenburg
Company: Microbial Insights
Address: 10515 Research Dr.
Knoxville, TN 37931

email: accounting@microbe.com
Phone: 865-573-8188 ext. 115
Fax:

Purchase Order No.
Subcontract No.
MI Quote No.

microbialinsights
10515 Research Dr
Knoxville, TN 37932

865-573-8188
www.microbe.com

Please Check One:
☐ More samples to follow
☐ No Additional Samples

Saturday Delivery
Please see sampling protocol for instructions

Please contact us prior to submitting samples regarding questions about the analyses you are requesting at (865) 573-8188 (8:00 am to 4:00 pm M-F). After these hours please email customerservice@microbe.com.

Sample Information					Analysis																								
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	14C 1,4-Dioxane Cometabolic Assay																						Other:	Other:	Other:
	001QH-1	8/7/19	1030	GW	X																								
	~~001QH-2~~																												
	~~001QH-3~~																												
	001QH-4	8/7/19	1530	OW	X																								
	~~001QH-5~~																												

Relinquished by: [signature] Date 8/7/19 Received by: FedEx Date 8/7/19

In order for analysis to be completed correctly, it is vital that chain of custody is filled out correctly & that all relative information is provided. Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable. * additional cost and sample preservation are associated with RNA samples.

REPORT TO:

Name: Eric Johnson
Company: WSP USA
Address: 13530 Dulles Technology Dr
Suite 300
Herndon, VA 20171
email: eric.johnson@wsp.com
Phone: 703-209-6500
Fax:

Project Manager: Eric Johnson
Project Name: Kop Flex Offsite
Project No.: 31401545.011

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)

Name:
Company:
Address:
email:
Phone:
Fax:

Purchase Order No.
Subcontract No.
MI Quote No. Q2019717.0003

microbialinsights

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Knoxville, TN 37932
865-573-8188

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Please Check One:
☐ More samples to follow
☒ No Additional Samples

Report Type: ☒ Standard (default) ☐ Microbial Insights Level III raw data(15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive(15%) ☐ Historical Interpretive (35%)

EDD type: ☒ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type: ____

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

Sample Information										CENSUS: Please select the target organism/gene						
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	Total Number of Containers					SMMO (Soluble Methane Monooxygenase)	PPO (Propane Monooxygenase)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	Other:	Other:	Other:
~~001QH-1~~	~~MW-24D~~															
001QH-2	MW-25D-130	8/8/19	1230	GW	1					X	X	X	X			
001QH-3	MW-25D-192	8/8/19	1000	GW	1					X	X	X	X			
~~001QH-4~~	~~MW-30D-273~~															
001QH-5	MW-33D-295	8/8/19	1615	GW	1					X	X	X	X			

Relinquished by: Shannon Buckley Date 8/8/19 Received by: [signature] Date 8/9/19

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

REPORT TO:
Reports will be provided to the contact(s) listed below. Parties other than the contact(s) listed below will require prior approval.

Name: Kate Clark
Company: Microbial Insights
Address: 10515 Research Dr.
Knoxville, TN 37931

email: kclark@microbe.com
Phone: 865-573-8188 ext. 100
Fax:

Project Manager: Kate Clark
Project Name:
Project No.: 001QH

INVOICE TO:
For Invoices **paid by a third party** it is imperative that contact information & corresponding reference No. be provided.

Name: Matthew Ellenburg
Company: Microbial Insights
Address: 10515 Research Dr.
Knoxville, TN 37931

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Please Check One:
☐ More samples to follow
☐ No Additional Samples

Saturday Delivery
Please see sampling protocol for instructions

Please contact us prior to submitting samples regarding questions about the analyses you are requesting at (865) 573-8188 (8:00 am to 4:00 pm M-F). After these hours please email customerservice@microbe.com.

Sample Information					Analysis			
MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	14C 1,4-Dioxane Cometabolic Assay	Other:	Other:	Other:
	~~001QH-1~~							
	001QH-2	8/8/19	1230	GW	X			
	001QH-3	8/8/19	1000	GW	X			
	~~001QH-4~~							
	~~001QH-5~~							

Relinquished by: [signature] Date 8/8/19 Received by: FeDEx Date 8/8/19

In order for analysis to be completed correctly, it is vital that chain of custody is filled out correctly & that all relative information is provided. Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable. * additional cost and sample preservation are associated with RNA samples.

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

August 16, 2019

Eric Johnson
WSP USA
13530 Dulles Technology Drive
Suite 300
Herndon, VA 20171

RE: Project: Kop-Flex Offsite
Pace Project No.: 92440749

Dear Eric Johnson:
Enclosed are the analytical results for sample(s) received by the laboratory on August 09, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Taylor Ezell
taylor.ezell@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Molly Long, WSP

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

CERTIFICATIONS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

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

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

SAMPLE SUMMARY

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92440749001	**MW-24D**	Water	08/07/19 08:55	08/09/19 09:27
92440749002	**MW-30D-273**	Water	08/07/19 11:35	08/09/19 09:27
92440749003	**MW-25D-192**	Water	08/08/19 08:20	08/09/19 09:27
92440749004	**MW-25D-130**	Water	08/08/19 08:30	08/09/19 09:27
92440749005	**MW-33D-295**	Water	08/08/19 14:05	08/09/19 09:27
92440749006	**Trip Blank**	Water	08/08/19 00:00	08/09/19 09:27
92440749007	**MW-24D**	Water	08/07/19 10:30	08/09/19 09:27
92440749008	**MW-30D-273**	Water	08/07/19 15:30	08/09/19 09:27
92440749009	**MW-25D-192**	Water	08/08/19 10:00	08/09/19 09:27
92440749010	**MW-25D-130**	Water	08/08/19 12:30	08/09/19 09:27
92440749011	**MW-33D-295**	Water	08/08/19 16:15	08/09/19 09:27
92440749012	**MW-100**	Water	08/08/19 09:00	08/09/19 09:27

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

SAMPLE ANALYTE COUNT

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92440749001	**MW-24D**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92440749002	**MW-30D-273**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92440749003	**MW-25D-192**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92440749004	**MW-25D-130**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92440749005	**MW-33D-295**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92440749006	**Trip Blank**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C
92440749007	**MW-24D**	RSK 175 Modified	LMB	3	PASI-C
		SM 2320B-2011	ECH	1	PASI-A
		SM 4500-S2D-2011	GC	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	2	PASI-A
92440749008	**MW-30D-273**	RSK 175 Modified	LMB	3	PASI-C
		SM 2320B-2011	ECH	1	PASI-A
		SM 4500-S2D-2011	GC	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	2	PASI-A
92440749009	**MW-25D-192**	RSK 175 Modified	LMB	3	PASI-C
		SM 2320B-2011	ECH	1	PASI-A
		SM 4500-S2D-2011	GC	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	2	PASI-A
92440749010	**MW-25D-130**	RSK 175 Modified	LMB	3	PASI-C
		SM 2320B-2011	ECH	1	PASI-A
		SM 4500-S2D-2011	GC	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	2	PASI-A
92440749011	**MW-33D-295**	RSK 175 Modified	LMB	3	PASI-C
		SM 2320B-2011	ECH	1	PASI-A
		SM 4500-S2D-2011	GC	1	PASI-A
		EPA 300.0 Rev 2.1 1993	BRJ	2	PASI-A
92440749012	**MW-100**	EPA 8260B	CL	63	PASI-C
		EPA 8260B Mod.	LMB	3	PASI-C

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-24D **Lab ID: 92440749001** Collected: 08/07/19 08:55 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	125	5		08/14/19 19:28	67-64-1	
Benzene	ND	ug/L	5.0	5		08/14/19 19:28	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		08/14/19 19:28	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		08/14/19 19:28	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		08/14/19 19:28	75-27-4	
Bromoform	ND	ug/L	5.0	5		08/14/19 19:28	75-25-2	
Bromomethane	ND	ug/L	10.0	5		08/14/19 19:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	5		08/14/19 19:28	78-93-3	
Carbon tetrachloride	ND	ug/L	5.0	5		08/14/19 19:28	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		08/14/19 19:28	108-90-7	
Chloroethane	ND	ug/L	5.0	5		08/14/19 19:28	75-00-3	
Chloroform	ND	ug/L	25.0	5		08/14/19 19:28	67-66-3	
Chloromethane	ND	ug/L	5.0	5		08/14/19 19:28	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		08/14/19 19:28	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		08/14/19 19:28	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	25.0	5		08/14/19 19:28	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		08/14/19 19:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		08/14/19 19:28	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		08/14/19 19:28	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		08/14/19 19:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		08/14/19 19:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		08/14/19 19:28	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		08/14/19 19:28	75-71-8	
1,1-Dichloroethane	**49.5**	ug/L	5.0	5		08/14/19 19:28	75-34-3	
1,2-Dichloroethane	**6.0**	ug/L	5.0	5		08/14/19 19:28	107-06-2	
1,1-Dichloroethene	**832**	ug/L	5.0	5		08/14/19 19:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		08/14/19 19:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		08/14/19 19:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		08/14/19 19:28	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		08/14/19 19:28	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		08/14/19 19:28	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		08/14/19 19:28	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		08/14/19 19:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		08/14/19 19:28	10061-02-6	
Diisopropyl ether	ND	ug/L	5.0	5		08/14/19 19:28	108-20-3	
Ethylbenzene	ND	ug/L	5.0	5		08/14/19 19:28	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		08/14/19 19:28	87-68-3	
2-Hexanone	ND	ug/L	25.0	5		08/14/19 19:28	591-78-6	
p-Isopropyltoluene	ND	ug/L	5.0	5		08/14/19 19:28	99-87-6	
Methylene Chloride	ND	ug/L	25.0	5		08/14/19 19:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	5		08/14/19 19:28	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		08/14/19 19:28	1634-04-4	
Naphthalene	ND	ug/L	5.0	5		08/14/19 19:28	91-20-3	
Styrene	ND	ug/L	5.0	5		08/14/19 19:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		08/14/19 19:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		08/14/19 19:28	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	5		08/14/19 19:28	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-24D **Lab ID: 92440749001** Collected: 08/07/19 08:55 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	5.0	5		08/14/19 19:28	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		08/14/19 19:28	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		08/14/19 19:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		08/14/19 19:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		08/14/19 19:28	79-00-5	
Trichloroethene	ND	ug/L	5.0	5		08/14/19 19:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		08/14/19 19:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	5		08/14/19 19:28	96-18-4	
Vinyl acetate	ND	ug/L	10.0	5		08/14/19 19:28	108-05-4	
Vinyl chloride	ND	ug/L	5.0	5		08/14/19 19:28	75-01-4	
Xylene (Total)	ND	ug/L	5.0	5		08/14/19 19:28	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	5		08/14/19 19:28	179601-23-1	
o-Xylene	ND	ug/L	5.0	5		08/14/19 19:28	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	107	%	70-130	5		08/14/19 19:28	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	5		08/14/19 19:28	17060-07-0	
Toluene-d8 (S)	106	%	70-130	5		08/14/19 19:28	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**220**	ug/L	10.0	5		08/12/19 14:05	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	5		08/12/19 14:05	17060-07-0	
Toluene-d8 (S)	103	%	50-150	5		08/12/19 14:05	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-30D-273 **Lab ID: 92440749002** Collected: 08/07/19 11:35 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		08/13/19 03:46	67-64-1	
Benzene	ND	ug/L	1.0	1		08/13/19 03:46	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/19 03:46	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/19 03:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/19 03:46	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/13/19 03:46	75-25-2	
Bromomethane	ND	ug/L	2.0	1		08/13/19 03:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/19 03:46	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		08/13/19 03:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/19 03:46	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/13/19 03:46	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/13/19 03:46	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/13/19 03:46	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 03:46	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 03:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		08/13/19 03:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		08/13/19 03:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/19 03:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		08/13/19 03:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 03:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 03:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 03:46	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/19 03:46	75-71-8	
1,1-Dichloroethane	**1.1**	ug/L	1.0	1		08/13/19 03:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/19 03:46	107-06-2	
1,1-Dichloroethene	**49.6**	ug/L	1.0	1		08/13/19 03:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 03:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 03:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 03:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/19 03:46	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 03:46	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/19 03:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 03:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 03:46	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		08/13/19 03:46	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		08/13/19 03:46	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/13/19 03:46	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		08/13/19 03:46	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/19 03:46	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/13/19 03:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/19 03:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/19 03:46	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		08/13/19 03:46	91-20-3	
Styrene	ND	ug/L	1.0	1		08/13/19 03:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 03:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 03:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/13/19 03:46	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-30D-273 **Lab ID: 92440749002** Collected: 08/07/19 11:35 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		08/13/19 03:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 03:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 03:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/19 03:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/19 03:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/13/19 03:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/19 03:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/13/19 03:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		08/13/19 03:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		08/13/19 03:46	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		08/13/19 03:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		08/13/19 03:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/13/19 03:46	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	108	%	70-130	1		08/13/19 03:46	460-00-4	
1,2-Dichloroethane-d4 (S)	84	%	70-130	1		08/13/19 03:46	17060-07-0	
Toluene-d8 (S)	109	%	70-130	1		08/13/19 03:46	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**20.5**	ug/L	2.0	1		08/12/19 14:24	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		08/12/19 14:24	17060-07-0	
Toluene-d8 (S)	105	%	50-150	1		08/12/19 14:24	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-25D-192 **Lab ID: 92440749003** Collected: 08/08/19 08:20 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		08/13/19 04:23	67-64-1	
Benzene	ND	ug/L	1.0	1		08/13/19 04:23	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/19 04:23	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/19 04:23	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/19 04:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/13/19 04:23	75-25-2	
Bromomethane	ND	ug/L	2.0	1		08/13/19 04:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/19 04:23	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		08/13/19 04:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/19 04:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/13/19 04:23	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/13/19 04:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/13/19 04:23	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 04:23	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 04:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		08/13/19 04:23	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		08/13/19 04:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/19 04:23	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		08/13/19 04:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:23	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/19 04:23	75-71-8	
1,1-Dichloroethane	**9.6**	ug/L	1.0	1		08/13/19 04:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/19 04:23	107-06-2	
1,1-Dichloroethene	**34.5**	ug/L	1.0	1		08/13/19 04:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 04:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 04:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 04:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/19 04:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 04:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/19 04:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 04:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 04:23	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		08/13/19 04:23	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		08/13/19 04:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/13/19 04:23	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		08/13/19 04:23	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/19 04:23	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/13/19 04:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/19 04:23	108-10-1	
Methyl-tert-butyl ether	**1.7**	ug/L	1.0	1		08/13/19 04:23	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		08/13/19 04:23	91-20-3	
Styrene	ND	ug/L	1.0	1		08/13/19 04:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 04:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 04:23	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/13/19 04:23	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-25D-192 **Lab ID: 92440749003** Collected: 08/08/19 08:20 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		08/13/19 04:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/19 04:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/19 04:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/13/19 04:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/19 04:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/13/19 04:23	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		08/13/19 04:23	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		08/13/19 04:23	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		08/13/19 04:23	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		08/13/19 04:23	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/13/19 04:23	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	120	%	70-130	1		08/13/19 04:23	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130	1		08/13/19 04:23	17060-07-0	
Toluene-d8 (S)	109	%	70-130	1		08/13/19 04:23	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**30.6**	ug/L	2.0	1		08/12/19 14:44	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%	50-150	1		08/12/19 14:44	17060-07-0	
Toluene-d8 (S)	106	%	50-150	1		08/12/19 14:44	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-25D-130 **Lab ID: 92440749004** Collected: 08/08/19 08:30 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		08/13/19 04:04	67-64-1	
Benzene	ND	ug/L	1.0	1		08/13/19 04:04	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/19 04:04	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/19 04:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/19 04:04	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/13/19 04:04	75-25-2	
Bromomethane	ND	ug/L	2.0	1		08/13/19 04:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/19 04:04	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		08/13/19 04:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/19 04:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/13/19 04:04	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/13/19 04:04	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/13/19 04:04	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 04:04	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 04:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		08/13/19 04:04	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		08/13/19 04:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/19 04:04	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		08/13/19 04:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:04	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/19 04:04	75-71-8	
1,1-Dichloroethane	**3.8**	ug/L	1.0	1		08/13/19 04:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/19 04:04	107-06-2	
1,1-Dichloroethene	**112**	ug/L	1.0	1		08/13/19 04:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 04:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 04:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 04:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/19 04:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 04:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/19 04:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 04:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 04:04	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		08/13/19 04:04	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		08/13/19 04:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/13/19 04:04	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		08/13/19 04:04	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/19 04:04	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/13/19 04:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/19 04:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/19 04:04	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		08/13/19 04:04	91-20-3	
Styrene	ND	ug/L	1.0	1		08/13/19 04:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 04:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 04:04	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/13/19 04:04	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-25D-130 **Lab ID: 92440749004** Collected: 08/08/19 08:30 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		08/13/19 04:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 04:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/19 04:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/19 04:04	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/13/19 04:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/19 04:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/13/19 04:04	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		08/13/19 04:04	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		08/13/19 04:04	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		08/13/19 04:04	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		08/13/19 04:04	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/13/19 04:04	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	85	%	70-130	1		08/13/19 04:04	460-00-4	
1,2-Dichloroethane-d4 (S)	85	%	70-130	1		08/13/19 04:04	17060-07-0	
Toluene-d8 (S)	110	%	70-130	1		08/13/19 04:04	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**39.6**	ug/L	2.0	1		08/12/19 15:03	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		08/12/19 15:03	17060-07-0	
Toluene-d8 (S)	104	%	50-150	1		08/12/19 15:03	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-33D-295 **Lab ID: 92440749005** Collected: 08/08/19 14:05 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		08/13/19 02:51	67-64-1	
Benzene	ND	ug/L	1.0	1		08/13/19 02:51	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/19 02:51	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/19 02:51	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/19 02:51	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/13/19 02:51	75-25-2	
Bromomethane	ND	ug/L	2.0	1		08/13/19 02:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/19 02:51	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		08/13/19 02:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/19 02:51	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/13/19 02:51	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/13/19 02:51	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/13/19 02:51	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 02:51	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 02:51	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		08/13/19 02:51	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		08/13/19 02:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/19 02:51	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		08/13/19 02:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:51	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/19 02:51	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/13/19 02:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/19 02:51	107-06-2	
1,1-Dichloroethene	**4.5**	ug/L	1.0	1		08/13/19 02:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 02:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 02:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 02:51	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/19 02:51	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 02:51	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/19 02:51	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 02:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 02:51	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		08/13/19 02:51	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		08/13/19 02:51	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/13/19 02:51	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		08/13/19 02:51	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/19 02:51	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/13/19 02:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/19 02:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/19 02:51	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		08/13/19 02:51	91-20-3	
Styrene	ND	ug/L	1.0	1		08/13/19 02:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 02:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 02:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/13/19 02:51	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-33D-295 **Lab ID: 92440749005** Collected: 08/08/19 14:05 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		08/13/19 02:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/19 02:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/19 02:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/13/19 02:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/19 02:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/13/19 02:51	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		08/13/19 02:51	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		08/13/19 02:51	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		08/13/19 02:51	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		08/13/19 02:51	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/13/19 02:51	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	116	%	70-130	1		08/13/19 02:51	460-00-4	
1,2-Dichloroethane-d4 (S)	81	%	70-130	1		08/13/19 02:51	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		08/13/19 02:51	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**6.0**	ug/L	2.0	1		08/12/19 15:22	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	50-150	1		08/12/19 15:22	17060-07-0	
Toluene-d8 (S)	105	%	50-150	1		08/12/19 15:22	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: Trip Blank **Lab ID: 92440749006** Collected: 08/08/19 00:00 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		08/13/19 02:14	67-64-1	
Benzene	ND	ug/L	1.0	1		08/13/19 02:14	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/13/19 02:14	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/13/19 02:14	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/13/19 02:14	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/13/19 02:14	75-25-2	
Bromomethane	ND	ug/L	2.0	1		08/13/19 02:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/13/19 02:14	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		08/13/19 02:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/13/19 02:14	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/13/19 02:14	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/13/19 02:14	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/13/19 02:14	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 02:14	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/13/19 02:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		08/13/19 02:14	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		08/13/19 02:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/13/19 02:14	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		08/13/19 02:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/13/19 02:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/13/19 02:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/13/19 02:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/13/19 02:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 02:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/13/19 02:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 02:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/13/19 02:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		08/13/19 02:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/13/19 02:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 02:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/13/19 02:14	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		08/13/19 02:14	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		08/13/19 02:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/13/19 02:14	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		08/13/19 02:14	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/13/19 02:14	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/13/19 02:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/13/19 02:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/13/19 02:14	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		08/13/19 02:14	91-20-3	
Styrene	ND	ug/L	1.0	1		08/13/19 02:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 02:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/13/19 02:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/13/19 02:14	127-18-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: Trip Blank **Lab ID: 92440749006** Collected: 08/08/19 00:00 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		08/13/19 02:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/13/19 02:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/13/19 02:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/13/19 02:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/13/19 02:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/13/19 02:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/13/19 02:14	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		08/13/19 02:14	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		08/13/19 02:14	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		08/13/19 02:14	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		08/13/19 02:14	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/13/19 02:14	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	118	%	70-130	1		08/13/19 02:14	460-00-4	
1,2-Dichloroethane-d4 (S)	81	%	70-130	1		08/13/19 02:14	17060-07-0	
Toluene-d8 (S)	113	%	70-130	1		08/13/19 02:14	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		08/12/19 12:28	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%	50-150	1		08/12/19 12:28	17060-07-0	
Toluene-d8 (S)	105	%	50-150	1		08/12/19 12:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-24D **Lab ID: 92440749007** Collected: 08/07/19 10:30 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 Headspace	Analytical Method: RSK 175 Modified							
Ethane	ND	ug/L	10.0	1		08/13/19 15:20	74-84-0	
Ethene	ND	ug/L	10.0	1		08/13/19 15:20	74-85-1	
Methane	ND	ug/L	10.0	1		08/13/19 15:20	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B-2011							
Alkalinity, Total as CaCO3	**8.8**	mg/L	5.0	1		08/12/19 20:27		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011							
Sulfide	ND	mg/L	0.10	1		08/13/19 20:45	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
Chloride	**14.2**	mg/L	1.0	1		08/10/19 23:58	16887-00-6	
Sulfate	**1.1**	mg/L	1.0	1		08/10/19 23:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-30D-273 **Lab ID: 92440749008** Collected: 08/07/19 15:30 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 Headspace	Analytical Method: RSK 175 Modified							
Ethane	ND	ug/L	10.0	1		08/13/19 15:36	74-84-0	
Ethene	ND	ug/L	10.0	1		08/13/19 15:36	74-85-1	
Methane	ND	ug/L	10.0	1		08/13/19 15:36	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B-2011							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1		08/12/19 20:42		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011							
Sulfide	ND	mg/L	0.10	1		08/13/19 20:46	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
Chloride	**1.7**	mg/L	1.0	1		08/11/19 00:12	16887-00-6	
Sulfate	**1.3**	mg/L	1.0	1		08/11/19 00:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-25D-192 **Lab ID: 92440749009** Collected: 08/08/19 10:00 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 Headspace	Analytical Method: RSK 175 Modified							
Ethane	ND	ug/L	10.0	1		08/13/19 15:51	74-84-0	
Ethene	ND	ug/L	10.0	1		08/13/19 15:51	74-85-1	
Methane	ND	ug/L	10.0	1		08/13/19 15:51	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B-2011							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1		08/12/19 20:55		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011							
Sulfide	ND	mg/L	0.10	1		08/13/19 20:53	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
Chloride	**9.6**	mg/L	1.0	1		08/11/19 00:26	16887-00-6	
Sulfate	ND	mg/L	1.0	1		08/11/19 00:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-25D-130 **Lab ID: 92440749010** Collected: 08/08/19 12:30 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 Headspace	Analytical Method: RSK 175 Modified							
Ethane	ND	ug/L	10.0	1		08/13/19 16:06	74-84-0	
Ethene	ND	ug/L	10.0	1		08/13/19 16:06	74-85-1	
Methane	ND	ug/L	10.0	1		08/13/19 16:06	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B-2011							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1		08/12/19 20:58		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011							
Sulfide	ND	mg/L	0.10	1		08/13/19 20:53	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
Chloride	**8.4**	mg/L	1.0	1		08/11/19 01:10	16887-00-6	
Sulfate	ND	mg/L	1.0	1		08/11/19 01:10	14808-79-8	

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-33D-295 **Lab ID: 92440749011** Collected: 08/08/19 16:15 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 Headspace	Analytical Method: RSK 175 Modified							
Ethane	ND	ug/L	10.0	1		08/13/19 16:21	74-84-0	
Ethene	ND	ug/L	10.0	1		08/13/19 16:21	74-85-1	
Methane	ND	ug/L	10.0	1		08/13/19 16:21	74-82-8	
2320B Alkalinity	Analytical Method: SM 2320B-2011							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1		08/12/19 21:01		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D-2011							
Sulfide	ND	mg/L	0.10	1		08/13/19 20:54	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993							
Chloride	**1.3**	mg/L	1.0	1		08/11/19 01:25	16887-00-6	
Sulfate	ND	mg/L	1.0	1		08/11/19 01:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-100 **Lab ID: 92440749012** Collected: 08/08/19 09:00 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	25.0	1		08/16/19 00:40	67-64-1	
Benzene	ND	ug/L	1.0	1		08/16/19 00:40	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/16/19 00:40	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/16/19 00:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/16/19 00:40	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/16/19 00:40	75-25-2	
Bromomethane	ND	ug/L	2.0	1		08/16/19 00:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/16/19 00:40	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		08/16/19 00:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/16/19 00:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/16/19 00:40	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/16/19 00:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/16/19 00:40	74-87-3	M1
2-Chlorotoluene	ND	ug/L	1.0	1		08/16/19 00:40	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/16/19 00:40	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		08/16/19 00:40	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		08/16/19 00:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/16/19 00:40	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		08/16/19 00:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/16/19 00:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/16/19 00:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/16/19 00:40	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/16/19 00:40	75-71-8	
1,1-Dichloroethane	**10.1**	ug/L	1.0	1		08/16/19 00:40	75-34-3	M1,R1
1,2-Dichloroethane	ND	ug/L	1.0	1		08/16/19 00:40	107-06-2	
1,1-Dichloroethene	**44.3**	ug/L	1.0	1		08/16/19 00:40	75-35-4	M1,R1
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/16/19 00:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/16/19 00:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/16/19 00:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/16/19 00:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		08/16/19 00:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/16/19 00:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/16/19 00:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/16/19 00:40	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		08/16/19 00:40	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		08/16/19 00:40	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/16/19 00:40	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		08/16/19 00:40	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/16/19 00:40	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/16/19 00:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/16/19 00:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/16/19 00:40	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		08/16/19 00:40	91-20-3	
Styrene	ND	ug/L	1.0	1		08/16/19 00:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/16/19 00:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/16/19 00:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/16/19 00:40	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Sample: MW-100 **Lab ID: 92440749012** Collected: 08/08/19 09:00 Received: 08/09/19 09:27 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260B							
Toluene	ND	ug/L	1.0	1		08/16/19 00:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/16/19 00:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/16/19 00:40	120-82-1	
1,1,1-Trichloroethane	**5.9**	ug/L	1.0	1		08/16/19 00:40	71-55-6	M1
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/16/19 00:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/16/19 00:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/16/19 00:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/16/19 00:40	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		08/16/19 00:40	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		08/16/19 00:40	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		08/16/19 00:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		08/16/19 00:40	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/16/19 00:40	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%	70-130	1		08/16/19 00:40	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		08/16/19 00:40	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		08/16/19 00:40	2037-26-5	
8260 MSV SIM	Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	**34.8**	ug/L	2.0	1		08/14/19 16:16	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	111	%	50-150	1		08/14/19 16:16	17060-07-0	
Toluene-d8 (S)	106	%	50-150	1		08/14/19 16:16	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 492011 Analysis Method: RSK 175 Modified
QC Batch Method: RSK 175 Modified Analysis Description: RSK 175 HEADSPACE
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

METHOD BLANK: 2653127 Matrix: Water
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethane	ug/L	ND	10.0	08/13/19 15:05	
Ethene	ug/L	ND	10.0	08/13/19 15:05	
Methane	ug/L	ND	10.0	08/13/19 15:05	

LABORATORY CONTROL SAMPLE: 2653128

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethane	ug/L	658	674	102	70-130	
Ethene	ug/L	1120	1170	104	70-130	
Methane	ug/L	396	398	100	70-130	

MATRIX SPIKE SAMPLE: 2653561

Parameter	Units	92440749008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Ethane	ug/L	ND	658	691	105	70-130	
Ethene	ug/L	ND	1120	1290	115	70-130	
Methane	ug/L	ND	396	405	102	70-130	

SAMPLE DUPLICATE: 2653560

Parameter	Units	92440749007 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	ND	ND		20	

SAMPLE DUPLICATE: 2653562

Parameter	Units	92440752007 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethane	ug/L	ND	ND		20	
Ethene	ug/L	ND	ND		20	
Methane	ug/L	141	83.4	51	20	D6

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 491812 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92440749002, 92440749003, 92440749004, 92440749005, 92440749006

METHOD BLANK: 2652272 Matrix: Water
Associated Lab Samples: 92440749002, 92440749003, 92440749004, 92440749005, 92440749006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	08/13/19 01:19	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/13/19 01:19	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/13/19 01:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/13/19 01:19	
1,1-Dichloroethane	ug/L	ND	1.0	08/13/19 01:19	
1,1-Dichloroethene	ug/L	ND	1.0	08/13/19 01:19	
1,1-Dichloropropene	ug/L	ND	1.0	08/13/19 01:19	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/13/19 01:19	
1,2,3-Trichloropropane	ug/L	ND	1.0	08/13/19 01:19	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/13/19 01:19	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	08/13/19 01:19	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/13/19 01:19	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/13/19 01:19	
1,2-Dichloroethane	ug/L	ND	1.0	08/13/19 01:19	
1,2-Dichloropropane	ug/L	ND	1.0	08/13/19 01:19	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/13/19 01:19	
1,3-Dichloropropane	ug/L	ND	1.0	08/13/19 01:19	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/13/19 01:19	
2,2-Dichloropropane	ug/L	ND	1.0	08/13/19 01:19	
2-Butanone (MEK)	ug/L	ND	5.0	08/13/19 01:19	
2-Chlorotoluene	ug/L	ND	1.0	08/13/19 01:19	
2-Hexanone	ug/L	ND	5.0	08/13/19 01:19	
4-Chlorotoluene	ug/L	ND	1.0	08/13/19 01:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/13/19 01:19	
Acetone	ug/L	ND	25.0	08/13/19 01:19	
Benzene	ug/L	ND	1.0	08/13/19 01:19	
Bromobenzene	ug/L	ND	1.0	08/13/19 01:19	
Bromochloromethane	ug/L	ND	1.0	08/13/19 01:19	
Bromodichloromethane	ug/L	ND	1.0	08/13/19 01:19	
Bromoform	ug/L	ND	1.0	08/13/19 01:19	
Bromomethane	ug/L	ND	2.0	08/13/19 01:19	
Carbon tetrachloride	ug/L	ND	1.0	08/13/19 01:19	
Chlorobenzene	ug/L	ND	1.0	08/13/19 01:19	
Chloroethane	ug/L	ND	1.0	08/13/19 01:19	
Chloroform	ug/L	ND	5.0	08/13/19 01:19	
Chloromethane	ug/L	ND	1.0	08/13/19 01:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/13/19 01:19	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/13/19 01:19	
Dibromochloromethane	ug/L	ND	1.0	08/13/19 01:19	
Dibromomethane	ug/L	ND	1.0	08/13/19 01:19	
Dichlorodifluoromethane	ug/L	ND	1.0	08/13/19 01:19	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

METHOD BLANK: 2652272 Matrix: Water
Associated Lab Samples: 92440749002, 92440749003, 92440749004, 92440749005, 92440749006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	08/13/19 01:19	
Ethylbenzene	ug/L	ND	1.0	08/13/19 01:19	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/13/19 01:19	
m&p-Xylene	ug/L	ND	2.0	08/13/19 01:19	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/13/19 01:19	
Methylene Chloride	ug/L	ND	5.0	08/13/19 01:19	
Naphthalene	ug/L	ND	1.0	08/13/19 01:19	
o-Xylene	ug/L	ND	1.0	08/13/19 01:19	
p-Isopropyltoluene	ug/L	ND	1.0	08/13/19 01:19	
Styrene	ug/L	ND	1.0	08/13/19 01:19	
Tetrachloroethene	ug/L	ND	1.0	08/13/19 01:19	
Toluene	ug/L	ND	1.0	08/13/19 01:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/13/19 01:19	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/13/19 01:19	
Trichloroethene	ug/L	ND	1.0	08/13/19 01:19	
Trichlorofluoromethane	ug/L	ND	1.0	08/13/19 01:19	
Vinyl acetate	ug/L	ND	2.0	08/13/19 01:19	
Vinyl chloride	ug/L	ND	1.0	08/13/19 01:19	
Xylene (Total)	ug/L	ND	1.0	08/13/19 01:19	
1,2-Dichloroethane-d4 (S)	%	80	70-130	08/13/19 01:19	
4-Bromofluorobenzene (S)	%	108	70-130	08/13/19 01:19	
Toluene-d8 (S)	%	107	70-130	08/13/19 01:19	

LABORATORY CONTROL SAMPLE: 2652273

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.3	105	70-130	
1,1,1-Trichloroethane	ug/L	50	54.4	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.8	108	70-130	
1,1,2-Trichloroethane	ug/L	50	43.5	87	70-130	
1,1-Dichloroethane	ug/L	50	53.3	107	70-130	
1,1-Dichloroethene	ug/L	50	58.7	117	70-130	
1,1-Dichloropropene	ug/L	50	51.1	102	70-130	
1,2,3-Trichlorobenzene	ug/L	50	44.4	89	70-130	
1,2,3-Trichloropropane	ug/L	50	52.6	105	70-130	
1,2,4-Trichlorobenzene	ug/L	50	46.8	94	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.8	102	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	45.8	92	70-130	
1,2-Dichlorobenzene	ug/L	50	47.6	95	70-130	
1,2-Dichloroethane	ug/L	50	49.7	99	70-130	
1,2-Dichloropropane	ug/L	50	58.3	117	70-130	
1,3-Dichlorobenzene	ug/L	50	47.8	96	70-130	
1,3-Dichloropropane	ug/L	50	47.7	95	70-131	
1,4-Dichlorobenzene	ug/L	50	47.9	96	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

LABORATORY CONTROL SAMPLE: 2652273

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	56.7	113	69-130	
2-Butanone (MEK)	ug/L	100	100	100	64-135	
2-Chlorotoluene	ug/L	50	48.7	97	70-130	
2-Hexanone	ug/L	100	88.2	88	66-135	
4-Chlorotoluene	ug/L	50	49.7	99	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	69.7	70	70-130	
Acetone	ug/L	100	90.3	90	61-157	
Benzene	ug/L	50	56.2	112	70-130	
Bromobenzene	ug/L	50	48.7	97	70-130	
Bromochloromethane	ug/L	50	51.7	103	70-130	
Bromodichloromethane	ug/L	50	55.9	112	70-130	
Bromoform	ug/L	50	52.0	104	70-130	
Bromomethane	ug/L	50	46.6	93	38-130	
Carbon tetrachloride	ug/L	50	52.1	104	70-130	
Chlorobenzene	ug/L	50	50.6	101	70-130	
Chloroethane	ug/L	50	67.8	136	37-142	
Chloroform	ug/L	50	51.6	103	70-130	
Chloromethane	ug/L	50	49.0	98	48-130	
cis-1,2-Dichloroethene	ug/L	50	53.5	107	70-130	
cis-1,3-Dichloropropene	ug/L	50	45.3	91	70-130	
Dibromochloromethane	ug/L	50	43.2	86	70-130	
Dibromomethane	ug/L	50	50.5	101	70-130	
Dichlorodifluoromethane	ug/L	50	58.5	117	53-134	
Diisopropyl ether	ug/L	50	53.7	107	70-135	
Ethylbenzene	ug/L	50	51.0	102	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.7	93	68-132	
m&p-Xylene	ug/L	100	101	101	70-130	
Methyl-tert-butyl ether	ug/L	50	51.0	102	70-130	
Methylene Chloride	ug/L	50	46.6	93	67-132	
Naphthalene	ug/L	50	49.4	99	70-130	
o-Xylene	ug/L	50	53.4	107	70-130	
p-Isopropyltoluene	ug/L	50	50.3	101	70-130	
Styrene	ug/L	50	53.4	107	70-130	
Tetrachloroethene	ug/L	50	40.9	82	69-130	
Toluene	ug/L	50	37.9	76	70-130	
trans-1,2-Dichloroethene	ug/L	50	56.4	113	70-130	
trans-1,3-Dichloropropene	ug/L	50	40.9	82	70-130	
Trichloroethene	ug/L	50	57.6	115	70-130	
Trichlorofluoromethane	ug/L	50	55.4	111	63-130	
Vinyl acetate	ug/L	100	102	102	55-143	
Vinyl chloride	ug/L	50	62.6	125	70-131	
Xylene (Total)	ug/L	150	154	103	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			87	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

MATRIX SPIKE SAMPLE: 2652792

Parameter	Units	92440815002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.34	20	20.7	103	73-134	
1,1,1-Trichloroethane	ug/L	<0.18	20	20.3	102	82-143	
1,1,2,2-Tetrachloroethane	ug/L	<0.22	20	21.7	108	70-136	
1,1,2-Trichloroethane	ug/L	<0.24	20	20.3	101	70-135	
1,1-Dichloroethane	ug/L	<0.27	20	20.4	102	70-139	
1,1-Dichloroethene	ug/L	<0.24	20	21.0	105	70-154	
1,1-Dichloropropene	ug/L	<0.21	20	20.0	100	70-149	
1,2,3-Trichlorobenzene	ug/L	<0.34	20	20.9	105	70-135	
1,2,3-Trichloropropane	ug/L	<0.35	20	23.2	116	71-137	
1,2,4-Trichlorobenzene	ug/L	<0.22	20	20.3	102	73-140	
1,2-Dibromo-3-chloropropane	ug/L	<0.26	20	22.3	112	65-134	
1,2-Dibromoethane (EDB)	ug/L	<0.26	20	20.2	101	70-137	
1,2-Dichlorobenzene	ug/L	<0.29	20	20.1	101	70-133	
1,2-Dichloroethane	ug/L	1.7	20	20.3	93	70-137	
1,2-Dichloropropane	ug/L	<0.19	20	20.5	102	70-140	
1,3-Dichlorobenzene	ug/L	<0.22	20	20.5	102	70-135	
1,3-Dichloropropane	ug/L	<0.16	20	20.4	102	70-143	
1,4-Dichlorobenzene	ug/L	<0.26	20	20.1	100	70-133	
2,2-Dichloropropane	ug/L	<0.27	20	20.5	102	61-148	
2-Butanone (MEK)	ug/L	<3.3	40	43.2	108	60-139	
2-Chlorotoluene	ug/L	<0.20	20	20.2	101	70-144	
2-Hexanone	ug/L	<0.57	40	47.1	118	65-138	
4-Chlorotoluene	ug/L	<0.20	20	20.4	102	70-137	
4-Methyl-2-pentanone (MIBK)	ug/L	<4.5	40	45.5	114	65-135	
Acetone	ug/L	<6.2	40	46.4	116	60-148	
Benzene	ug/L	2.4	20	23.8	107	70-151	
Bromobenzene	ug/L	<0.22	20	20.2	101	70-136	
Bromochloromethane	ug/L	<0.34	20	19.7	98	70-141	
Bromodichloromethane	ug/L	<0.26	20	20.4	102	70-138	
Bromoform	ug/L	<0.62	20	20.5	102	63-130	
Bromomethane	ug/L	<0.62	20	22.4	112	15-152	
Carbon tetrachloride	ug/L	<0.22	20	20.3	101	70-143	
Chlorobenzene	ug/L	<0.23	20	20.3	102	70-138	
Chloroethane	ug/L	<0.49	20	21.8	109	52-163	
Chloroform	ug/L	<2.3	20	20.1	101	70-139	
Chloromethane	ug/L	<0.39	20	19.7	99	41-139	
cis-1,2-Dichloroethene	ug/L	<0.29	20	19.8	99	70-141	
cis-1,3-Dichloropropene	ug/L	<0.30	20	20.7	103	70-137	
Dibromochloromethane	ug/L	<0.41	20	19.8	99	70-134	
Dibromomethane	ug/L	<0.46	20	19.6	98	70-138	
Dichlorodifluoromethane	ug/L	<0.23	20	20.8	104	47-155	
Diisopropyl ether	ug/L	<0.22	20	20.5	103	63-144	
Ethylbenzene	ug/L	3.4	20	24.0	103	66-153	
Hexachloro-1,3-butadiene	ug/L	<0.44	20	22.3	111	65-149	
m&p-Xylene	ug/L	<0.41	40	42.2	106	69-152	
Methyl-tert-butyl ether	ug/L	<0.28	20	19.6	98	54-156	
Methylene Chloride	ug/L	<3.7	20	18.7	93	42-159	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

MATRIX SPIKE SAMPLE: 2652792

Parameter	Units	92440815002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	<0.35	20	22.1	110	61-148	
o-Xylene	ug/L	1.9	20	24.0	111	70-148	
p-Isopropyltoluene	ug/L	<0.21	20	22.0	110	70-146	
Styrene	ug/L	0.32J	20	21.7	107	70-135	
Tetrachloroethene	ug/L	<0.16	20	20.4	102	59-143	
Toluene	ug/L	<0.24	20	20.6	103	59-148	
trans-1,2-Dichloroethene	ug/L	<0.25	20	20.4	102	70-146	
trans-1,3-Dichloropropene	ug/L	<0.31	20	20.4	102	70-135	
Trichloroethene	ug/L	<0.22	20	20.9	104	70-147	
Trichlorofluoromethane	ug/L	<0.31	20	20.3	101	70-148	
Vinyl acetate	ug/L	<1.4	40	40.9	102	49-151	
Vinyl chloride	ug/L	<0.24	20	21.4	107	70-156	
Xylene (Total)	ug/L	1.9	60	66.2	107	63-158	
1,2-Dichloroethane-d4 (S)	%				95	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 2652791

Parameter	Units	92440815001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.34	ND		30	
1,1,1-Trichloroethane	ug/L	<0.18	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	<0.22	ND		30	
1,1,2-Trichloroethane	ug/L	<0.24	ND		30	
1,1-Dichloroethane	ug/L	<0.27	ND		30	
1,1-Dichloroethene	ug/L	<0.24	ND		30	
1,1-Dichloropropene	ug/L	<0.21	ND		30	
1,2,3-Trichlorobenzene	ug/L	<0.34	ND		30	
1,2,3-Trichloropropane	ug/L	<0.35	ND		30	
1,2,4-Trichlorobenzene	ug/L	<0.22	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	<0.26	ND		30	
1,2-Dibromoethane (EDB)	ug/L	<0.26	ND		30	
1,2-Dichlorobenzene	ug/L	<0.29	ND		30	
1,2-Dichloroethane	ug/L	<0.34	ND		30	
1,2-Dichloropropane	ug/L	<0.19	ND		30	
1,3-Dichlorobenzene	ug/L	<0.22	ND		30	
1,3-Dichloropropane	ug/L	<0.16	ND		30	
1,4-Dichlorobenzene	ug/L	<0.26	ND		30	
2,2-Dichloropropane	ug/L	<0.27	ND		30	
2-Butanone (MEK)	ug/L	<3.3	ND		30	
2-Chlorotoluene	ug/L	<0.20	ND		30	
2-Hexanone	ug/L	<0.57	ND		30	
4-Chlorotoluene	ug/L	<0.20	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	<4.5	ND		30	
Acetone	ug/L	<6.2	ND		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

SAMPLE DUPLICATE: 2652791

Parameter	Units	92440815001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	<0.15	ND		30	
Bromobenzene	ug/L	<0.22	ND		30	
Bromochloromethane	ug/L	<0.34	ND		30	
Bromodichloromethane	ug/L	<0.26	ND		30	
Bromoform	ug/L	<0.62	ND		30	
Bromomethane	ug/L	<0.62	ND		30	
Carbon tetrachloride	ug/L	<0.22	ND		30	
Chlorobenzene	ug/L	<0.23	ND		30	
Chloroethane	ug/L	<0.49	ND		30	
Chloroform	ug/L	<2.3	ND		30	
Chloromethane	ug/L	<0.39	ND		30	
cis-1,2-Dichloroethene	ug/L	1.3	1.5	15	30	
cis-1,3-Dichloropropene	ug/L	<0.30	ND		30	
Dibromochloromethane	ug/L	<0.41	ND		30	
Dibromomethane	ug/L	<0.46	ND		30	
Dichlorodifluoromethane	ug/L	<0.23	ND		30	
Diisopropyl ether	ug/L	<0.22	ND		30	
Ethylbenzene	ug/L	<0.26	ND		30	
Hexachloro-1,3-butadiene	ug/L	<0.44	ND		30	
m&p-Xylene	ug/L	<0.41	ND		30	
Methyl-tert-butyl ether	ug/L	<0.28	ND		30	
Methylene Chloride	ug/L	<3.7	ND		30	
Naphthalene	ug/L	<0.35	ND		30	
o-Xylene	ug/L	<0.22	ND		30	
p-Isopropyltoluene	ug/L	<0.21	ND		30	
Styrene	ug/L	<0.27	ND		30	
Tetrachloroethene	ug/L	<0.16	ND		30	
Toluene	ug/L	<0.24	ND		30	
trans-1,2-Dichloroethene	ug/L	<0.25	ND		30	
trans-1,3-Dichloropropene	ug/L	<0.31	ND		30	
Trichloroethene	ug/L	<0.22	ND		30	
Trichlorofluoromethane	ug/L	<0.31	ND		30	
Vinyl acetate	ug/L	<1.4	ND		30	
Vinyl chloride	ug/L	<0.24	ND		30	
Xylene (Total)	ug/L	<0.63	ND		30	
1,2-Dichloroethane-d4 (S)	%	89	99			
4-Bromofluorobenzene (S)	%	102	106			
Toluene-d8 (S)	%	82	101			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 492156 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92440749001

METHOD BLANK: 2653701 Matrix: Water
Associated Lab Samples: 92440749001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	08/14/19 14:51	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/14/19 14:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/14/19 14:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/14/19 14:51	
1,1-Dichloroethane	ug/L	ND	1.0	08/14/19 14:51	
1,1-Dichloroethene	ug/L	ND	1.0	08/14/19 14:51	
1,1-Dichloropropene	ug/L	ND	1.0	08/14/19 14:51	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/14/19 14:51	
1,2,3-Trichloropropane	ug/L	ND	1.0	08/14/19 14:51	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/14/19 14:51	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	08/14/19 14:51	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/14/19 14:51	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/14/19 14:51	
1,2-Dichloroethane	ug/L	ND	1.0	08/14/19 14:51	
1,2-Dichloropropane	ug/L	ND	1.0	08/14/19 14:51	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/14/19 14:51	
1,3-Dichloropropane	ug/L	ND	1.0	08/14/19 14:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/14/19 14:51	
2,2-Dichloropropane	ug/L	ND	1.0	08/14/19 14:51	
2-Butanone (MEK)	ug/L	ND	5.0	08/14/19 14:51	
2-Chlorotoluene	ug/L	ND	1.0	08/14/19 14:51	
2-Hexanone	ug/L	ND	5.0	08/14/19 14:51	
4-Chlorotoluene	ug/L	ND	1.0	08/14/19 14:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/14/19 14:51	
Acetone	ug/L	ND	25.0	08/14/19 14:51	
Benzene	ug/L	ND	1.0	08/14/19 14:51	
Bromobenzene	ug/L	ND	1.0	08/14/19 14:51	
Bromochloromethane	ug/L	ND	1.0	08/14/19 14:51	
Bromodichloromethane	ug/L	ND	1.0	08/14/19 14:51	
Bromoform	ug/L	ND	1.0	08/14/19 14:51	
Bromomethane	ug/L	ND	2.0	08/14/19 14:51	
Carbon tetrachloride	ug/L	ND	1.0	08/14/19 14:51	
Chlorobenzene	ug/L	ND	1.0	08/14/19 14:51	
Chloroethane	ug/L	ND	1.0	08/14/19 14:51	
Chloroform	ug/L	ND	5.0	08/14/19 14:51	
Chloromethane	ug/L	ND	1.0	08/14/19 14:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/14/19 14:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/14/19 14:51	
Dibromochloromethane	ug/L	ND	1.0	08/14/19 14:51	
Dibromomethane	ug/L	ND	1.0	08/14/19 14:51	
Dichlorodifluoromethane	ug/L	ND	1.0	08/14/19 14:51	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

METHOD BLANK: 2653701 Matrix: Water
Associated Lab Samples: 92440749001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	08/14/19 14:51	
Ethylbenzene	ug/L	ND	1.0	08/14/19 14:51	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/14/19 14:51	
m&p-Xylene	ug/L	ND	2.0	08/14/19 14:51	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/14/19 14:51	
Methylene Chloride	ug/L	ND	5.0	08/14/19 14:51	
Naphthalene	ug/L	ND	1.0	08/14/19 14:51	
o-Xylene	ug/L	ND	1.0	08/14/19 14:51	
p-Isopropyltoluene	ug/L	ND	1.0	08/14/19 14:51	
Styrene	ug/L	ND	1.0	08/14/19 14:51	
Tetrachloroethene	ug/L	ND	1.0	08/14/19 14:51	
Toluene	ug/L	ND	1.0	08/14/19 14:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/14/19 14:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/14/19 14:51	
Trichloroethene	ug/L	ND	1.0	08/14/19 14:51	
Trichlorofluoromethane	ug/L	ND	1.0	08/14/19 14:51	
Vinyl acetate	ug/L	ND	2.0	08/14/19 14:51	
Vinyl chloride	ug/L	ND	1.0	08/14/19 14:51	
Xylene (Total)	ug/L	ND	1.0	08/14/19 14:51	
1,2-Dichloroethane-d4 (S)	%	103	70-130	08/14/19 14:51	
4-Bromofluorobenzene (S)	%	109	70-130	08/14/19 14:51	
Toluene-d8 (S)	%	104	70-130	08/14/19 14:51	

LABORATORY CONTROL SAMPLE: 2653702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.0	104	70-130	
1,1,1-Trichloroethane	ug/L	50	52.4	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	51.3	103	70-130	
1,1,2-Trichloroethane	ug/L	50	54.4	109	70-130	
1,1-Dichloroethane	ug/L	50	53.9	108	70-130	
1,1-Dichloroethene	ug/L	50	53.9	108	70-130	
1,1-Dichloropropene	ug/L	50	51.0	102	70-130	
1,2,3-Trichlorobenzene	ug/L	50	50.2	100	70-130	
1,2,3-Trichloropropane	ug/L	50	53.1	106	70-130	
1,2,4-Trichlorobenzene	ug/L	50	48.6	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	54.4	109	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	51.9	104	70-130	
1,2-Dichlorobenzene	ug/L	50	47.5	95	70-130	
1,2-Dichloroethane	ug/L	50	51.1	102	70-130	
1,2-Dichloropropane	ug/L	50	52.4	105	70-130	
1,3-Dichlorobenzene	ug/L	50	47.8	96	70-130	
1,3-Dichloropropane	ug/L	50	52.0	104	70-131	
1,4-Dichlorobenzene	ug/L	50	46.9	94	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

LABORATORY CONTROL SAMPLE: 2653702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	55.2	110	69-130	
2-Butanone (MEK)	ug/L	100	121	121	64-135	
2-Chlorotoluene	ug/L	50	48.4	97	70-130	
2-Hexanone	ug/L	100	114	114	66-135	
4-Chlorotoluene	ug/L	50	48.5	97	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	121	121	70-130	
Acetone	ug/L	100	119	119	61-157	
Benzene	ug/L	50	51.6	103	70-130	
Bromobenzene	ug/L	50	49.9	100	70-130	
Bromochloromethane	ug/L	50	50.4	101	70-130	
Bromodichloromethane	ug/L	50	55.0	110	70-130	
Bromoform	ug/L	50	59.8	120	70-130	
Bromomethane	ug/L	50	55.0	110	38-130	1g
Carbon tetrachloride	ug/L	50	50.6	101	70-130	
Chlorobenzene	ug/L	50	47.9	96	70-130	
Chloroethane	ug/L	50	45.6	91	37-142	1g
Chloroform	ug/L	50	53.3	107	70-130	
Chloromethane	ug/L	50	48.1	96	48-130	1g
cis-1,2-Dichloroethene	ug/L	50	52.8	106	70-130	
cis-1,3-Dichloropropene	ug/L	50	58.6	117	70-130	
Dibromochloromethane	ug/L	50	54.7	109	70-130	
Dibromomethane	ug/L	50	52.6	105	70-130	
Dichlorodifluoromethane	ug/L	50	50.3	101	53-134	
Diisopropyl ether	ug/L	50	58.7	117	70-135	
Ethylbenzene	ug/L	50	48.5	97	70-130	
Hexachloro-1,3-butadiene	ug/L	50	49.2	98	68-132	
m&p-Xylene	ug/L	100	97.7	98	70-130	
Methyl-tert-butyl ether	ug/L	50	59.0	118	70-130	
Methylene Chloride	ug/L	50	53.9	108	67-132	
Naphthalene	ug/L	50	51.4	103	70-130	
o-Xylene	ug/L	50	50.3	101	70-130	
p-Isopropyltoluene	ug/L	50	48.9	98	70-130	
Styrene	ug/L	50	50.5	101	70-130	
Tetrachloroethene	ug/L	50	48.0	96	69-130	
Toluene	ug/L	50	50.3	101	70-130	
trans-1,2-Dichloroethene	ug/L	50	53.7	107	70-130	
trans-1,3-Dichloropropene	ug/L	50	59.1	118	70-130	
Trichloroethene	ug/L	50	50.0	100	70-130	
Trichlorofluoromethane	ug/L	50	50.9	102	63-130	
Vinyl acetate	ug/L	100	131	131	55-143	
Vinyl chloride	ug/L	50	52.7	105	70-131	
Xylene (Total)	ug/L	150	148	99	70-130	
1,2-Dichloroethane-d4 (S)	%			109	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			101	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2655677 2655678

Parameter	Units	92439697001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	100	100	118	113	118	113	73-134	4	30	
1,1,1-Trichloroethane	ug/L	ND	100	100	123	110	123	110	82-143	11	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	100	100	116	119	116	119	70-136	3	30	
1,1,2-Trichloroethane	ug/L	ND	100	100	112	111	112	111	70-135	1	30	
1,1-Dichloroethane	ug/L	ND	100	100	112	110	112	110	70-139	2	30	
1,1-Dichloroethene	ug/L	ND	100	100	117	113	117	113	70-154	4	30	
1,1-Dichloropropene	ug/L	ND	100	100	120	111	120	111	70-149	8	30	
1,2,3-Trichlorobenzene	ug/L	ND	100	100	116	107	116	107	70-135	8	30	
1,2,3-Trichloropropane	ug/L	ND	100	100	118	122	118	122	71-137	3	30	
1,2,4-Trichlorobenzene	ug/L	ND	100	100	113	103	113	103	73-140	9	30	
1,2-Dibromo-3-chloropropane	ug/L				112	113				1	30	
1,2-Dibromoethane (EDB)	ug/L	ND	100	100	112	114	112	114	70-137	2	30	
1,2-Dichlorobenzene	ug/L	ND	100	100	111	114	111	114	70-133	2	30	
1,2-Dichloroethane	ug/L	ND	100	100	115	96.6	115	97	70-137	18	30	
1,2-Dichloropropane	ug/L	ND	100	100	114	113	114	113	70-140	1	30	
1,3-Dichlorobenzene	ug/L	ND	100	100	109	115	109	115	70-135	5	30	
1,3-Dichloropropane	ug/L	ND	100	100	117	120	117	120	70-143	2	30	
1,4-Dichlorobenzene	ug/L	ND	100	100	111	108	111	108	70-133	3	30	
2,2-Dichloropropane	ug/L	ND	100	100	124	114	124	114	61-148	8	30	
2-Butanone (MEK)	ug/L	278	200	200	484	462	103	92	60-139	5	30	
2-Chlorotoluene	ug/L	ND	100	100	110	113	110	113	70-144	2	30	
2-Hexanone	ug/L	ND	200	200	229	233	115	117	65-138	2	30	
4-Chlorotoluene	ug/L	ND	100	100	113	122	113	122	70-137	7	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	200	200	220	224	110	112	65-135	2	30	
Acetone	ug/L	1670	200	200	1720	1640	27	-12	60-148	5	30	M1
Benzene	ug/L	ND	100	100	115	115	115	115	70-151	0	30	
Bromobenzene	ug/L	ND	100	100	118	117	118	117	70-136	1	30	
Bromochloromethane	ug/L	ND	100	100	106	99.7	106	100	70-141	6	30	
Bromodichloromethane	ug/L	ND	100	100	117	112	117	112	70-138	4	30	
Bromoform	ug/L	ND	100	100	119	108	119	108	63-130	10	30	
Bromomethane	ug/L	ND	100	100	98.4	92.2	98	92	15-152	7	30	
Carbon tetrachloride	ug/L	ND	100	100	121	116	121	116	70-143	4	30	
Chlorobenzene	ug/L	ND	100	100	113	113	113	113	70-138	0	30	
Chloroethane	ug/L	ND	100	100	112	106	112	106	52-163	5	30	
Chloroform	ug/L	ND	100	100	120	110	120	110	70-139	9	30	
Chloromethane	ug/L	ND	100	100	107	101	107	101	41-139	6	30	
cis-1,2-Dichloroethene	ug/L	ND	100	100	115	106	115	106	70-141	8	30	
cis-1,3-Dichloropropene	ug/L	ND	100	100	117	117	117	117	70-137	0	30	
Dibromochloromethane	ug/L	ND	100	100	112	112	112	112	70-134	0	30	
Dibromomethane	ug/L	ND	100	100	108	110	108	110	70-138	2	30	
Dichlorodifluoromethane	ug/L	ND	100	100	133	125	133	125	47-155	6	30	
Diisopropyl ether	ug/L	ND	100	100	117	112	117	112	63-144	4	30	
Ethylbenzene	ug/L	ND	100	100	118	118	118	118	66-153	0	30	
Hexachloro-1,3-butadiene	ug/L	ND	100	100	125	109	125	109	65-149	14	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2655677 2655678

Parameter	Units	92439697001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	ND	200	200	244	240	122	120	69-152	1	30	
Methyl-tert-butyl ether	ug/L	ND	100	100	118	113	118	113	54-156	4	30	
Methylene Chloride	ug/L	ND	100	100	101	99.6	101	100	42-159	2	30	
Naphthalene	ug/L	ND	100	100	107	112	107	112	61-148	4	30	
o-Xylene	ug/L	ND	100	100	116	116	116	116	70-148	0	30	
p-Isopropyltoluene	ug/L	ND	100	100	115	121	115	121	70-146	5	30	
Styrene	ug/L	ND	100	100	116	115	116	115	70-135	1	30	
Tetrachloroethene	ug/L	ND	100	100	121	108	121	108	59-143	11	30	
Toluene	ug/L	15.1	100	100	124	126	109	111	59-148	1	30	
trans-1,2-Dichloroethene	ug/L	ND	100	100	117	111	117	111	70-146	5	30	
trans-1,3-Dichloropropene	ug/L	ND	100	100	112	117	112	117	70-135	4	30	
Trichloroethene	ug/L	ND	100	100	115	118	115	118	70-147	3	30	
Trichlorofluoromethane	ug/L	ND	100	100	117	113	117	113	70-148	3	30	
Vinyl acetate	ug/L	ND	200	200	264	258	132	129	49-151	3	30	
Vinyl chloride	ug/L	ND	100	100	121	114	121	114	70-156	6	30	
Xylene (Total)	ug/L				360	356				1	30	
1,2-Dichloroethane-d4 (S)	%						105	93	70-130			
4-Bromofluorobenzene (S)	%						100	105	70-130			
Toluene-d8 (S)	%						96	98	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 492544 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92440749012

METHOD BLANK: 2655507 Matrix: Water
Associated Lab Samples: 92440749012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	08/15/19 14:58	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/15/19 14:58	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/15/19 14:58	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/15/19 14:58	
1,1-Dichloroethane	ug/L	ND	1.0	08/15/19 14:58	
1,1-Dichloroethene	ug/L	ND	1.0	08/15/19 14:58	
1,1-Dichloropropene	ug/L	ND	1.0	08/15/19 14:58	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/15/19 14:58	
1,2,3-Trichloropropane	ug/L	ND	1.0	08/15/19 14:58	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/15/19 14:58	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	08/15/19 14:58	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/15/19 14:58	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/15/19 14:58	
1,2-Dichloroethane	ug/L	ND	1.0	08/15/19 14:58	
1,2-Dichloropropane	ug/L	ND	1.0	08/15/19 14:58	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/15/19 14:58	
1,3-Dichloropropane	ug/L	ND	1.0	08/15/19 14:58	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/15/19 14:58	
2,2-Dichloropropane	ug/L	ND	1.0	08/15/19 14:58	
2-Butanone (MEK)	ug/L	ND	5.0	08/15/19 14:58	
2-Chlorotoluene	ug/L	ND	1.0	08/15/19 14:58	
2-Hexanone	ug/L	ND	5.0	08/15/19 14:58	
4-Chlorotoluene	ug/L	ND	1.0	08/15/19 14:58	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/15/19 14:58	
Acetone	ug/L	ND	25.0	08/15/19 14:58	
Benzene	ug/L	ND	1.0	08/15/19 14:58	
Bromobenzene	ug/L	ND	1.0	08/15/19 14:58	
Bromochloromethane	ug/L	ND	1.0	08/15/19 14:58	
Bromodichloromethane	ug/L	ND	1.0	08/15/19 14:58	
Bromoform	ug/L	ND	1.0	08/15/19 14:58	
Bromomethane	ug/L	ND	2.0	08/15/19 14:58	
Carbon tetrachloride	ug/L	ND	1.0	08/15/19 14:58	
Chlorobenzene	ug/L	ND	1.0	08/15/19 14:58	
Chloroethane	ug/L	ND	1.0	08/15/19 14:58	
Chloroform	ug/L	ND	5.0	08/15/19 14:58	
Chloromethane	ug/L	ND	1.0	08/15/19 14:58	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/15/19 14:58	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/15/19 14:58	
Dibromochloromethane	ug/L	ND	1.0	08/15/19 14:58	
Dibromomethane	ug/L	ND	1.0	08/15/19 14:58	
Dichlorodifluoromethane	ug/L	ND	1.0	08/15/19 14:58	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

METHOD BLANK: 2655507 Matrix: Water
Associated Lab Samples: 92440749012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	08/15/19 14:58	
Ethylbenzene	ug/L	ND	1.0	08/15/19 14:58	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/15/19 14:58	
m&p-Xylene	ug/L	ND	2.0	08/15/19 14:58	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/15/19 14:58	
Methylene Chloride	ug/L	ND	5.0	08/15/19 14:58	
Naphthalene	ug/L	ND	1.0	08/15/19 14:58	
o-Xylene	ug/L	ND	1.0	08/15/19 14:58	
p-Isopropyltoluene	ug/L	ND	1.0	08/15/19 14:58	
Styrene	ug/L	ND	1.0	08/15/19 14:58	
Tetrachloroethene	ug/L	ND	1.0	08/15/19 14:58	
Toluene	ug/L	ND	1.0	08/15/19 14:58	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/15/19 14:58	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/15/19 14:58	
Trichloroethene	ug/L	ND	1.0	08/15/19 14:58	
Trichlorofluoromethane	ug/L	ND	1.0	08/15/19 14:58	
Vinyl acetate	ug/L	ND	2.0	08/15/19 14:58	
Vinyl chloride	ug/L	ND	1.0	08/15/19 14:58	
Xylene (Total)	ug/L	ND	1.0	08/15/19 14:58	
1,2-Dichloroethane-d4 (S)	%	113	70-130	08/15/19 14:58	
4-Bromofluorobenzene (S)	%	101	70-130	08/15/19 14:58	
Toluene-d8 (S)	%	103	70-130	08/15/19 14:58	

LABORATORY CONTROL SAMPLE: 2655508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.9	102	70-130	
1,1,1-Trichloroethane	ug/L	50	49.5	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	52.4	105	70-130	
1,1,2-Trichloroethane	ug/L	50	50.2	100	70-130	
1,1-Dichloroethane	ug/L	50	48.6	97	70-130	
1,1-Dichloroethene	ug/L	50	48.5	97	70-130	
1,1-Dichloropropene	ug/L	50	49.2	98	70-130	
1,2,3-Trichlorobenzene	ug/L	50	49.4	99	70-130	
1,2,3-Trichloropropane	ug/L	50	53.9	108	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.6	99	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.8	104	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.9	106	70-130	
1,2-Dichlorobenzene	ug/L	50	49.2	98	70-130	
1,2-Dichloroethane	ug/L	50	46.6	93	70-130	
1,2-Dichloropropane	ug/L	50	50.3	101	70-130	
1,3-Dichlorobenzene	ug/L	50	47.4	95	70-130	
1,3-Dichloropropane	ug/L	50	53.1	106	70-131	
1,4-Dichlorobenzene	ug/L	50	49.1	98	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

LABORATORY CONTROL SAMPLE: 2655508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	49.3	99	69-130	
2-Butanone (MEK)	ug/L	100	104	104	64-135	
2-Chlorotoluene	ug/L	50	49.5	99	70-130	
2-Hexanone	ug/L	100	105	105	66-135	
4-Chlorotoluene	ug/L	50	50.2	100	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	104	104	70-130	
Acetone	ug/L	100	106	106	61-157	
Benzene	ug/L	50	48.5	97	70-130	
Bromobenzene	ug/L	50	51.7	103	70-130	
Bromochloromethane	ug/L	50	48.9	98	70-130	
Bromodichloromethane	ug/L	50	50.6	101	70-130	
Bromoform	ug/L	50	54.5	109	70-130	
Bromomethane	ug/L	50	48.2	96	38-130	
Carbon tetrachloride	ug/L	50	48.6	97	70-130	
Chlorobenzene	ug/L	50	47.3	95	70-130	
Chloroethane	ug/L	50	54.2	108	37-142	
Chloroform	ug/L	50	48.6	97	70-130	
Chloromethane	ug/L	50	42.1	84	48-130	
cis-1,2-Dichloroethene	ug/L	50	47.2	94	70-130	
cis-1,3-Dichloropropene	ug/L	50	53.7	107	70-130	
Dibromochloromethane	ug/L	50	53.0	106	70-130	
Dibromomethane	ug/L	50	47.6	95	70-130	
Dichlorodifluoromethane	ug/L	50	45.2	90	53-134	
Diisopropyl ether	ug/L	50	53.8	108	70-135	
Ethylbenzene	ug/L	50	49.9	100	70-130	
Hexachloro-1,3-butadiene	ug/L	50	49.0	98	68-132	
m&p-Xylene	ug/L	100	100	100	70-130	
Methyl-tert-butyl ether	ug/L	50	53.9	108	70-130	
Methylene Chloride	ug/L	50	46.5	93	67-132	
Naphthalene	ug/L	50	50.8	102	70-130	
o-Xylene	ug/L	50	50.5	101	70-130	
p-Isopropyltoluene	ug/L	50	50.8	102	70-130	
Styrene	ug/L	50	51.2	102	70-130	
Tetrachloroethene	ug/L	50	48.2	96	69-130	
Toluene	ug/L	50	46.7	93	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.4	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	52.9	106	70-130	
Trichloroethene	ug/L	50	49.6	99	70-130	
Trichlorofluoromethane	ug/L	50	45.7	91	63-130	
Vinyl acetate	ug/L	100	107	107	55-143	
Vinyl chloride	ug/L	50	44.8	90	70-131	
Xylene (Total)	ug/L	150	151	101	70-130	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			96	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2655509 2655510

Parameter	Units	92440749012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	22.3	21.9	112	109	73-134	2	30	
1,1,1-Trichloroethane	ug/L	5.9	20	20	22.2	29.8	81	119	82-143	29	30	M1
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	22.0	22.0	110	110	70-136	0	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	21.6	21.5	108	107	70-135	1	30	
1,1-Dichloroethane	ug/L	10.1	20	20	22.4	32.0	61	110	70-139	35	30	M1,R1
1,1-Dichloroethene	ug/L	44.3	20	20	23.1	66.4	-106	110	70-154	97	30	M1,R1
1,1-Dichloropropene	ug/L	ND	20	20	22.2	22.1	111	110	70-149	0	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.6	20.1	103	100	70-135	3	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	22.6	22.9	113	114	71-137	1	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.3	20.1	102	101	73-140	1	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	20.2	21.2	101	106	65-134	5	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.7	21.3	108	107	70-137	2	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	21.0	20.9	105	105	70-133	0	30	
1,2-Dichloroethane	ug/L	ND	20	20	20.7	20.5	101	100	70-137	1	30	
1,2-Dichloropropane	ug/L	ND	20	20	22.4	21.9	112	110	70-140	2	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	21.0	20.9	105	105	70-135	0	30	
1,3-Dichloropropane	ug/L	ND	20	20	22.2	22.0	111	110	70-143	1	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	20.7	20.7	103	104	70-133	0	30	
2,2-Dichloropropane	ug/L	ND	20	20	24.1	23.6	120	118	61-148	2	30	
2-Butanone (MEK)	ug/L	ND	40	40	42.7	43.9	107	110	60-139	3	30	
2-Chlorotoluene	ug/L	ND	20	20	21.0	21.3	105	107	70-144	2	30	
2-Hexanone	ug/L	ND	40	40	45.4	46.1	113	115	65-138	2	30	
4-Chlorotoluene	ug/L	ND	20	20	21.1	21.2	105	106	70-137	0	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	43.6	44.3	109	111	65-135	2	30	
Acetone	ug/L	ND	40	40	51.8	48.5	129	121	60-148	7	30	
Benzene	ug/L	ND	20	20	22.8	22.6	114	113	70-151	1	30	
Bromobenzene	ug/L	ND	20	20	21.5	21.7	108	109	70-136	1	30	
Bromochloromethane	ug/L	ND	20	20	21.7	21.4	108	107	70-141	1	30	
Bromodichloromethane	ug/L	ND	20	20	22.3	22.0	111	110	70-138	1	30	
Bromoform	ug/L	ND	20	20	21.4	21.0	107	105	63-130	2	30	
Bromomethane	ug/L	ND	20	20	21.5	20.8	108	104	15-152	4	30	
Carbon tetrachloride	ug/L	ND	20	20	22.5	22.3	112	112	70-143	1	30	
Chlorobenzene	ug/L	ND	20	20	21.5	21.4	108	107	70-138	1	30	
Chloroethane	ug/L	ND	20	20	25.3	24.3	127	121	52-163	4	30	
Chloroform	ug/L	ND	20	20	21.8	21.8	109	109	70-139	0	30	
Chloromethane	ug/L	ND	20	20	28.3	26.9	141	135	41-139	5	30	M1
cis-1,2-Dichloroethene	ug/L	ND	20	20	21.7	21.7	108	108	70-141	0	30	
cis-1,3-Dichloropropene	ug/L	ND	20	20	23.1	22.9	115	114	70-137	1	30	
Dibromochloromethane	ug/L	ND	20	20	21.3	21.1	106	106	70-134	1	30	
Dibromomethane	ug/L	ND	20	20	20.8	20.9	104	105	70-138	0	30	
Dichlorodifluoromethane	ug/L	ND	20	20	20.6	20.5	103	102	47-155	1	30	
Diisopropyl ether	ug/L	ND	20	20	23.0	22.6	115	113	63-144	2	30	
Ethylbenzene	ug/L	ND	20	20	22.4	22.3	112	112	66-153	0	30	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	21.4	21.5	107	108	65-149	1	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2655509 2655510

Parameter	Units	92440749012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
m&p-Xylene	ug/L	ND	40	40	45.2	44.4	113	111	69-152	2	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	21.6	22.8	105	110	54-156	5	30	
Methylene Chloride	ug/L	ND	20	20	21.9	21.5	109	108	42-159	2	30	
Naphthalene	ug/L	ND	20	20	21.2	20.6	106	103	61-148	3	30	
o-Xylene	ug/L	ND	20	20	22.7	22.5	114	112	70-148	1	30	
p-Isopropyltoluene	ug/L	ND	20	20	22.0	22.3	110	111	70-146	1	30	
Styrene	ug/L	ND	20	20	22.2	21.9	111	110	70-135	1	30	
Tetrachloroethene	ug/L	ND	20	20	21.9	22.0	110	110	59-143	0	30	
Toluene	ug/L	ND	20	20	21.7	21.4	108	107	59-148	1	30	
trans-1,2-Dichloroethene	ug/L	ND	20	20	22.5	22.3	112	111	70-146	1	30	
trans-1,3-Dichloropropene	ug/L	ND	20	20	22.4	22.4	112	112	70-135	0	30	
Trichloroethene	ug/L	ND	20	20	22.2	22.4	111	112	70-147	1	30	
Trichlorofluoromethane	ug/L	ND	20	20	22.1	22.1	111	110	70-148	0	30	
Vinyl acetate	ug/L	ND	40	40	46.4	46.3	116	116	49-151	0	30	
Vinyl chloride	ug/L	ND	20	20	22.8	22.0	114	110	70-156	3	30	
Xylene (Total)	ug/L	ND	60	60	67.9	66.8	113	111	63-158	2	30	
1,2-Dichloroethane-d4 (S)	%						93	94	70-130			
4-Bromofluorobenzene (S)	%						103	102	70-130			
Toluene-d8 (S)	%						99	99	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 491722 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92440749001, 92440749002, 92440749003, 92440749004, 92440749005, 92440749006

METHOD BLANK: 2651706 Matrix: Water
Associated Lab Samples: 92440749001, 92440749002, 92440749003, 92440749004, 92440749005, 92440749006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	08/12/19 11:50	
1,2-Dichloroethane-d4 (S)	%	93	50-150	08/12/19 11:50	
Toluene-d8 (S)	%	101	50-150	08/12/19 11:50	

LABORATORY CONTROL SAMPLE: 2651707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	18.0	90	70-130	
1,2-Dichloroethane-d4 (S)	%			97	50-150	
Toluene-d8 (S)	%			104	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2652349 2652350

Parameter	Units	92440749002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	20.5	20	20	38.0	37.2	87	83	50-150	2	30	
1,2-Dichloroethane-d4 (S)	%						101	102	50-150		30	
Toluene-d8 (S)	%						103	103	50-150		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 492100 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92440749012

METHOD BLANK: 2653563 Matrix: Water
Associated Lab Samples: 92440749012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	08/14/19 13:56	
1,2-Dichloroethane-d4 (S)	%	103	50-150	08/14/19 13:56	
Toluene-d8 (S)	%	102	50-150	08/14/19 13:56	

LABORATORY CONTROL SAMPLE: 2653564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	20.6	103	70-130	
1,2-Dichloroethane-d4 (S)	%			101	50-150	
Toluene-d8 (S)	%			102	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2653565 2653566

Parameter	Units	92440749012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	34.8	20	20	57.6	60.4	114	128	50-150	5	30	
1,2-Dichloroethane-d4 (S)	%						110	112	50-150		30	
Toluene-d8 (S)	%						105	106	50-150		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 491765 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

METHOD BLANK: 2651979 Matrix: Water
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	08/12/19 18:50	

LABORATORY CONTROL SAMPLE: 2651980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.5	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651981 2651982

Parameter	Units	92439974045 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	75.3	50	50	126	127	101	103	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651983 2651984

Parameter	Units	92440749007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	8.8	50	50	63.4	62.6	109	108	80-120	1	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 491997 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

METHOD BLANK: 2653068 Matrix: Water
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	08/13/19 20:39	

LABORATORY CONTROL SAMPLE: 2653069

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.44	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2653070 2653071

Parameter	Units	92440426005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.46	0.46	91	90	80-120	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2653072 2653073

Parameter	Units	92440426006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.44	0.44	86	87	80-120	1	10	

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REPORT OF LABORATORY ANALYSIS

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(704)875-9092

QUALITY CONTROL DATA

Project: Kop-Flex Offsite
Pace Project No.: 92440749

QC Batch: 491562 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

METHOD BLANK: 2651123 Matrix: Water
Associated Lab Samples: 92440749007, 92440749008, 92440749009, 92440749010, 92440749011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	08/10/19 20:49	
Sulfate	mg/L	ND	1.0	08/10/19 20:49	

LABORATORY CONTROL SAMPLE: 2651124

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.9	102	90-110	
Sulfate	mg/L	50	51.2	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651125 2651126

Parameter	Units	92439980025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.6	50	50	57.8	58.2	105	105	90-110	1	10	
Sulfate	mg/L	10.5	50	50	62.4	62.8	104	105	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651127 2651128

Parameter	Units	92440749011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.3	50	50	53.8	53.7	105	105	90-110	0	10	
Sulfate	mg/L	ND	50	50	53.1	53.0	104	104	90-110	0	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Kop-Flex Offsite
Pace Project No.: 92440749

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

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

ANALYTE QUALIFIERS

1g	Initial calibration evaluation met acceptance criteria. Compound did not meet additional accuracy assessment for percent error
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Kop-Flex Offsite
Pace Project No.: 92440749

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92440749007	**MW-24D**	RSK 175 Modified	492011		
92440749008	**MW-30D-273**	RSK 175 Modified	492011		
92440749009	**MW-25D-192**	RSK 175 Modified	492011		
92440749010	**MW-25D-130**	RSK 175 Modified	492011		
92440749011	**MW-33D-295**	RSK 175 Modified	492011		
92440749001	**MW-24D**	EPA 8260B	492156		
92440749002	**MW-30D-273**	EPA 8260B	491812		
92440749003	**MW-25D-192**	EPA 8260B	491812		
92440749004	**MW-25D-130**	EPA 8260B	491812		
92440749005	**MW-33D-295**	EPA 8260B	491812		
92440749006	**Trip Blank**	EPA 8260B	491812		
92440749012	**MW-100**	EPA 8260B	492544		
92440749001	**MW-24D**	EPA 8260B Mod.	491722		
92440749002	**MW-30D-273**	EPA 8260B Mod.	491722		
92440749003	**MW-25D-192**	EPA 8260B Mod.	491722		
92440749004	**MW-25D-130**	EPA 8260B Mod.	491722		
92440749005	**MW-33D-295**	EPA 8260B Mod.	491722		
92440749006	**Trip Blank**	EPA 8260B Mod.	491722		
92440749012	**MW-100**	EPA 8260B Mod.	492100		
92440749007	**MW-24D**	SM 2320B-2011	491765		
92440749008	**MW-30D-273**	SM 2320B-2011	491765		
92440749009	**MW-25D-192**	SM 2320B-2011	491765		
92440749010	**MW-25D-130**	SM 2320B-2011	491765		
92440749011	**MW-33D-295**	SM 2320B-2011	491765		
92440749007	**MW-24D**	SM 4500-S2D-2011	491997		
92440749008	**MW-30D-273**	SM 4500-S2D-2011	491997		
92440749009	**MW-25D-192**	SM 4500-S2D-2011	491997		
92440749010	**MW-25D-130**	SM 4500-S2D-2011	491997		
92440749011	**MW-33D-295**	SM 4500-S2D-2011	491997		
92440749007	**MW-24D**	EPA 300.0 Rev 2.1 1993	491562		
92440749008	**MW-30D-273**	EPA 300.0 Rev 2.1 1993	491562		
92440749009	**MW-25D-192**	EPA 300.0 Rev 2.1 1993	491562		
92440749010	**MW-25D-130**	EPA 300.0 Rev 2.1 1993	491562		
92440749011	**MW-33D-295**	EPA 300.0 Rev 2.1 1993	491562		

Laboratory receiving samples: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: WSP

Project # WO# : 92440749

92440749

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

Custody Seal Present? ☐ Yes ☐ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: 8-9-18 MB

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

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

Thermometer: ☐ IR Gun ID: 92T048 **Type of Ice:** ☑ Wet ☐ Blue ☐ None

Cooler Temp (°C): 3.3 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 3.3

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☐ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☐ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☐ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☐ No	☐ N/A	4.
Sufficient Volume?	☐ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☐ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☐ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☐ N/A	

Field Data Required? ☐ Yes ☐ No

COMMENTS/SAMPLE DISCREPANCY

4 trip Blanks instead of 2

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: TR Date: 8/9

Project Manager SRF Review: TR Date: 8/9

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # WO# : 92440749

PM: PTE Due Date: 08/16/19

CLIENT: 92-WSP

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	VJGK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1																6													
2																6													
3																6													
4																6													
5																6													
6																4													
7		2					1												3										
8		2					1												3										
9		2					1												3										
10		2					1												3										
11		2					1												3										
12							1									6													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

CHAIN-OF-CUSTODY RECORD

WSP USA Office Address	13530 Dulles Technology Dr. Suite 300 Herndon VA
Project Name	Dop-Flex OFFSite
WSP USA Contact Name	Eric Johnson
Project Location	Hanover, MD
WSP USA Contact E-mail	Eric.Johnson @wsp.com
Project Number & Task	31401545.011/06
WSP USA Contact Phone	703-709-6500
Sampler(s) Name(s)	Chris Cresci, Shannon Burke
Sampler(s) Signature(s)	

Requested Analyses & Preservatives

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	VOCs 8260	1,4 Dioxane 8260 SIM	Alkalinity, Chloride, Sulfide	Sulfide	Methane, Ethane, Ethene						Sample Comments
mw-24D	Gw	8/7/19		0855		6	x	x									001
mw-30D-273	Gw	8/7/19		1135		6	x	x									002
mw-25D-192	Gw	8/8/19		0820		6	x	x									003
mw-25D-130	Gw	8/8/19		0830		6	x	x									004
mw-33D-295	GW	8/8/19		1405		6	x	x									005
TripBlank						2	x	1									006
mw-24D	Gw	8/7/19		1030		6			x	x	x						007
mw-30D-273	Gw	8/7/19		1530		6			x	x	x						008
mw-25D-192	Gw	8/8/19		1000		6			x	x	x						009
mw-25D-130	Gw	8/8/19		1230		6			x	x	x						010
mw-33D-295	Gw	8/8/19		1615		6			x	x	x						011
mw-100	Gw	8/8/19		0900		6	x	1									012

Relinquished By (Signature)	Date 8/8/19	Time	Received By (Signature) Fed Ex	Date 8/8/19	Time	Shipment Method	Tracking Number(s)	
Relinquished By (Signature)	Date	Time	Received By (Signature)	Date 8-9-19	Time 0927	Number of Packages	Custody Seal Number(s)	

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

No. 009966

WSP

Laboratory Name & Location: Pace Analytical

Laboratory Project Manager: Taylor Ezell

Requested Turn-Around-Time: [X] Standard [ ] 24 HR [ ] 48 HR [ ] 72 HR [ ] ___ HR 92440749

Page 50 of 50

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Pam Groff Robertson
WSP USA Buildings Inc.
13530 Dulles Technology Dr.
Suite 300
Herndon, VA 20171

Phone: 703-318-3958

Fax:

Identifier: 001QH **Date Rec:** 08/08/2019 **Report Date:** 08/15/2019

Client Project #: 31401545.011-06 **Client Project Name:** Former Kop-Flex Facility

Purchase Order #:

Analysis Requested: CENSUS, Special Studies

Reviewed By:

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **WSP USA Buildings Inc.**
Project: Former Kop-Flex Facility

MI Project Number: **001QH**
Date Received: 08/08/2019

Sample Information

Client Sample ID:		**MW-24D**	**MW-25D-130**	**MW-25D-192**	**MW-30D-273**	**MW-33D-295**
Sample Date:		08/07/2019	08/08/2019	08/08/2019	08/07/2019	08/08/2019
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst/Reviewer:		HT	HT	HT	HT	HT
Functional Genes						
Propane Monooxygenase	PPO	**6.00E-01 (J)**	**7.20E+00**	**1.20E+00 (J)**	**2.00E-01 (J)**	**1.52E+02**
Soluble Methane Monooxygenase	SMMO	<4.70E+00	<4.60E+00	<4.60E+00	<4.90E+00	<4.80E+00
Toluene Monooxygenase 2	RDEG	**1.77E+01**	**1.20E+02**	**3.94E+01**	**7.62E+01**	**2.37E+03**
Toluene Monooxygenase	RMO	<4.70E+00	<4.60E+00	<4.60E+00	<4.90E+00	<4.80E+00

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received **8/8/2019**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
PPO	08/08/2019	08/15/2019	0 °C	98%	non-detect	non-detect
RDEG	08/08/2019	08/15/2019	0 °C	106%	non-detect	non-detect
RMO	08/08/2019	08/15/2019	0 °C	106%	non-detect	non-detect
SMMO	08/08/2019	08/15/2019	0 °C	101%	non-detect	non-detect

Samples Received **8/9/2019**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
PPO	08/09/2019	08/15/2019	1 °C	98%	non-detect	non-detect
RDEG	08/09/2019	08/15/2019	1 °C	106%	non-detect	non-detect
RMO	08/09/2019	08/15/2019	1 °C	106%	non-detect	non-detect
SMMO	08/09/2019	08/15/2019	1 °C	101%	non-detect	non-detect

CHAIN-OF-CUSTODY RECORD

No. 009961

wsp

WSP USA Office Address	13530 Rolles Technology Dr. Suite 300 Herndon, VA
Project Name	Kop-Flex
WSP USA Contact Name	Pam Robertson
Project Location	Hanover, MD
WSP USA Contact E-mail	Pam.Robertson@wsp.com
Project Number & Task	31401545.011 106
WSP USA Contact Phone	703-709-6500
Sampler(s) Name(s)	Chris Oresq, Shannon Burrell
Sampler(s) Signature(s)	
Laboratory Name & Location	Microbial Insights
Laboratory Project Manager	Kate Clark
Requested Turn-Around-Time	[X] Standard [ ] 24 HR [ ] 48 HR [ ] 72 HR [ ] ___ HR

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	SMO	PDO (Propane Monooxygenase)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	Sample Comments
MW-24D	GW	8/7/19		1030		1	X	X	X	X	001QH1
MW-30D-273	GW	8/7/19		1530		1	X	X	X	X	4

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
				8/8/19	930		
Relinquished By (Signature)	**Date**	**Time**	**Received By (Signature)**	**Date**	**Time**	**Number of Packages**	**Custody Seal Number(s)**

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

REPORT TO:

Name: Eric Johnson
Company: WSP USA
Address: 13530 Dulles Technology Dr Suite 300 Herndon, VA 20171
email: eric.johnson@wsp.com
Phone: 703-209-6500
Fax:

INVOICE TO: (For Invoices paid by a third party it is imperative that all information be provided)

Name:
Company:
Address:
email:
Phone:
Fax:

microbialinsights

10515 Research Dr
Knoxville, TN 37932
865-573-8188

www.microbe.com

Project Manager: Eric Johnson
Project Name: Kop Flex Offsite
Project No.: 31401545.011

Purchase Order No.
Subcontract No.
MI Quote No. Q2019717.0003

Please Check One:
☐ More samples to follow
☒ No Additional Samples

Report Type: ☒ Standard (default) ☐ Microbial Insights Level III raw data(15% surcharge) ☐ Microbial Insights Level IV (25% surcharge) ☐ Comprehensive Interpretive(15%) ☐ Historical Interpretive (35%)

EDD type: ☒ Microbial Insights Standard (default) ☐ All other available EDDs (5% surcharge) Specify EDD Type:

Please contact us with any questions about the analyses or filling out the COC at (865) 573-8188 (9:00 am to 5:00 pm EST, M-F). After hours email: customerservice@microbe.com

MI ID (Laboratory Use Only)	Sample Name	Date Sampled	Time Sampled	Matrix	Total Number of Containers					SMMO (Soluble Methane Monooxygenase)	PPO (Propane Monooxygenase)	RMO (Toluene Monooxygenase)	RDEG (Toluene Monooxygenase)	Other:	Other:	Other:
~~001QH-1~~	~~MW-24D~~															
001QH-2	MW-25D-130	8/8/19	1230	GW	1					X	X	X	X			
001QH-3	MW-25D-192	8/8/19	1000	GW	1					X	X	X	X			
~~001QH-4~~	~~MW-30D-273~~															
001QH-5	MW-33D-295	8/8/19	1615	GW	1					X	X	X	X			

CENSUS: Please select the target organism/gene

Relinquished by: Shannon Bulee Date 8/8/19 Received by: [signature] Date 8/9/19

It is vital that chain of custody is filled out correctly & that all relative information is provided.
Failure to provide sufficient and/or correct information regarding reporting, invoicing & analyses requested information may result in delays for which MI will not be liable.

APPENDIX

C MNA EVALUATION LOW FLOW SAMPLING FORMS

WSP USA
13530 Dulles Technology Drive, Suite 300
Herndon, VA 20171 (703) 709-6500 • Fax (703) 709-8505

Low-Flow Groundwater Sampling Monitoring Form

Well ID	MW-24D	**Site ID:**	Kop Flex	**Sample Date:**	8/7/19
Well Diameter	2 in	**Sampling Event:**	MNA sampling 2019		
Depth to Water	52.37 ft	**Decon Procedures:**	Non-phosphate soap wash with DI water rinse		
Total Well Depth	128.5 ft	**Samplers:**	SUB/CC	**Notes:**	
Screen Length	10 ft	**Weather Conditions:**	Warm + sunny		
Pump Intake	123.5 ft	**Equipment:**	Bladder pump, drop tube, Horiba, compressor/controller		

Stabilized: Drawdown <0.3 feet; pH ± 0.1 SU; Specific Conductance ± 3%; Temperature ± 3%; DO ± 0.2 mg/l or 10%; Turbidity ± 10% for values greater than 10 NTU; ORP ± 10 mV

Instrument Calibration Information

pH Meter Calibration			Horiba U-52 Calibration
pH 7.00 Std.	pH 4.01 Std.	Sl. (mV/pH)	Notes on calibration: Calibrated to manufacturer's specifications using calibration standard solutions
NA	NA	NA	
Air temp =	100 °F		

Well Purging Information — Start purge: 924. — End purge: — Pump Type: Bladder

Time	DTW	T (°C)	pH	ORP/Eh (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/l) *	Flow Rate (mL/min)	Purge Volume (L)	Comments
938	54.35	22.05	5.81	398	0.100	10.9	9.64	400	Initial	clear
943	54.66	16.68	5.47	377	0.062	0.0	8.02	400	2.0	clear
948	54.60	16.00	5.60	366	0.058	3.9	7.92	300	3.5	clear
953	54.49	16.01	5.54	348	0.061	36.1	7.37	300	5.0	clearish
0958	54.55	16.11	5.53	376	0.059	31.9	6.65	300		Clear
1003	54.57	16.03	5.49	365	0.057	22.2	5.93	300		Clear
1008	54.57	15.99	5.46	354	0.054	14.4	5.73	300		Clear
1013	54.58	16.02	5.45	374	0.053	19.9	5.28	300		Clear
1018	54.58	16.03	5.45	373	0.053	9.2	5.21	300		clear
1023	54.57	16.02	5.44	372	0.053	8.8	5.15	300		clear

Laboratory Analysis Information

# of Bottles	Analytes	Collection Method	Preservative	Bottle Type	Anal. Lab.	Filtered	Sample Time	Comments
1	- SMMO; - PPO (Propane Monooxygenase); - RMO (Toluene monooxygenase); - RDEG (Toluene monooxygenase)	Bladder Pump			Microbial Insights	N	1030	
6	- Alkalinity, Chloride, Sulfate; - Sulfide; - Methane, Ethane, Ether				Pace Analytical			

WSP USA
13530 Dulles Technology Drive, Suite 300
Herndon, VA 20171 (703) 709-6500 • Fax (703) 709-8505

Low-Flow Groundwater Sampling Monitoring Form

Well ID	MW-30D-273	Site ID:	Kop Flex	Sample Date:	8/7/19
Well Diameter	2 in	Sampling Event:	MNA Sampling 2019		
Depth to Water	103.25 ft	Decon Procedures:	Non-phosphate soap wash with DI water rinse		
Total Well Depth	273 ft	Samplers:	SLB/CC	Notes:	
Screen Length	10 ft	Weather Conditions:	warm + sunny		
Pump Intake	268 ft	Equipment:	bladder pump w/ drop tube, Horiba,		

Stabilized: Drawdown <0.3 feet; pH ± 0.1 SU; Specific Conductance ± 3%; Temperature ± 3%; DO ± 0.2 mg/l or 10%; Turbidity ± 10% for values greater than 10 NTU; ORP ± 10 mV

Instrument Calibration Information

pH Meter Calibration			Horiba U-52 Calibration
pH 7.00 Std.	pH 4.01 Std.	Sl. (mV/pH)	Notes on calibration:
NA	NA	NA	Calibrated to manufacturer's specifications using calibration standard solutions
Air temp =	90 ~~100~~ °F		

Well Purging Information — Start purge: 1238 — End purge: 1517 — Pump Type: Bladder

Time	DTW	T (ºC)	pH	ORP/Eh (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/l) *	Flow Rate (mL/min)	Purge Volume (L)	Comments
1415	106.40	21.88	5.56	384	0.021	0.0	8.40	350		Clear
1420	106.40	22.87	5.52	374	0.019	0.0	7.69	250		
1425	106.40	21.95	4.74	435	0.014	4.0	6.07	250		
1430	106.40	21.33	4.67	447	0.013	11.1	5.08	250		
1435	106.40	21.31	4.58	451	0.013	14.2	4.97	250		
1440	106.40	20.52	4.57	458	0.013	11.6	4.93	250		
1445	106.40	20.93	4.55	454	0.012	10.9	5.66	250		
1450	106.40	20.40	4.56	457	0.013	10.7	5.38	250		
1455	106.40	19.65	4.58	466	0.013	8.0	5.29	250		
1500	106.40	17.91	4.57	472	0.013	9.4	5.52	250		
1505	106.40	17.24	4.53	476	0.013	8.5	5.55	250		
1510	106.40	17.18	4.56	479	0.013	9.7	5.57	250		
1515	106.40	17.28	4.58	480	0.013	7.5	5.46	250		

1530 Sample

Laboratory Analysis Information

# of Bottles	Analytes	Collection Method	Preservative	Bottle Type	Anal. Lab.	Filtered	Sample Time	Comments
1	- SMMO - PPO (Propane monooxygenase) - RMO (Toluene monooxygenase) - RDEG (Toluene monooxygenase)	Bladder Pump			Microbial Insights	N	1530	
6	- Alkalinity, Chloride, Sulfate - Sulfide - Methane, Ethane, Ethene				Pace Analytical			

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Low-Flow Groundwater Sampling Monitoring Form

Well ID	MW-25D-130	**Site ID:**	Kap Flex	**Sample Date:**	8/8/19
Well Diameter	2 in	**Sampling Event:**	MNA parameters 2019		
Depth to Water	60.79 ft	**Decon Procedures:**	Non-phosphate soap wash with DI water rinse		
Total Well Depth	130 ft	**Samplers:**	SLB/CC	**Notes:**	
Screen Length	10 ft	**Weather Conditions:**	sunny + hot		
Pump Intake	70 ft	**Equipment:**	Drop Tube Low Flow Set up		

Stabilized: Drawdown <0.3 feet; pH ± 0.1 SU; Specific Conductance ± 3%; Temperature ± 3%; DO ± 0.2 mg/l or 10%; Turbidity ± 10% for values greater than 10 NTU; ORP ± 10 mV

Instrument Calibration Information

pH Meter Calibration		
pH 7.00 Std.	pH 4.01 Std.	Sl. (mV/pH)
NA	NA	NA
Air temp =	85 ~~100~~ °F	

Horiba U-52 Calibration

Notes on calibration:
Calibrated to manufacturer's specifications using calibration standard solutions

Well Purging Information — Start purge: 1040 — End purge: 1216 — Pump Type: Bladder

Time	DTW	T (°C)	pH	ORP/Eh (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/l) *	Flow Rate (mL/min)	Purge Volume (L)	Comments
1045	60.42	23.88	4.83	478	0.024	0.7	5.69	250	initial	~~clear~~/turbid
1050	61.43	18.77	5.36	485	0.025	710	4.36	200	1.25	turbid
1055	61.40	19.04	5.05	455	0.018	333	4.10	150	2.25	turbid
1100	61.40	19.77	5.18	474	0.017	602	4.49	150	3.0	turbid
1105	61.42	19.70	5.10	468	0.017	381	4.03	125	~~4.125~~	turbid 3.75
1110	61.42	20.30	5.05	478	0.019	197	3.93	125	4.375	clearer
1115	61.38	20.83	5.00	463	0.021	147	4.45	125	5.0	clear
1120	61.40	20.68	4.99	477	0.022	107	4.22	125	5.625	clear
1125	61.40	21.10	4.94	484	0.022	131	4.07	125	6.25	clear
1130	61.40	21.48	4.92	491	0.023	74	3.88	125	6.875	clear
1135	61.40	21.42	4.92	494	0.023	61.0	3.74	125	7.5	clear
1140	61.40	21.40	4.90	494	0.024	53.3	3.75	125	8.125	clear
1145	61.40	20.80	4.91	496	0.023	47.9	3.95	125	8.75	clear
1150	61.40	20.17	4.87	491	0.023	45.9	3.56	125	9.375	clear
1155	61.40	19.94	4.85	494	0.024	41.0	3.41	125	10.0	clear
1200	61.40	19.94	4.82	497	0.025	38.6	3.18	125	10.625	clear
1205	61.40	19.96	4.79	501	0.026	32.9	3.13	125	11.25	clear
1208	61.40	20.17	4.77	502	0.026	31.7	3.05	125	11.875	clear
1211	61.40	20.12	4.77	504	0.027	29.8	3.02	125	12.5	clear
1214	61.40	20.20	4.70	505	0.027	28.8	2.98	125	13.125	clear

Laboratory Analysis Information

# of Bottles	Analytes	Collection Method	Preservative	Bottle Type	Anal. Lab.	Filtered	Sample Time	Comments
	- SMO	Bladder			Microbial Insights	N	1230	
	- PPO (Propane monooxygenase)	Pump						
1	- RMO (Toluene monooxygenase)							
	- ROEG (Toluene monooxygenase)							
6	- Alkalinity, Chloride, Sulfate				Pace Analytical			
	- Sulfide							
	- Methane, Ethane, Ether							

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Low-Flow Groundwater Sampling Monitoring Form

Well ID	MW-250-192 (~~[illegible]~~)	**Site ID:**	Rop-Flex Offsite	**Sample Date:**	8/8/19
Well Diameter	2 in	**Sampling Event:**	MNA Sampling 2019		
Depth to Water	60.37 ft	**Decon Procedures:**	Non-phosphate soap wash with DI water rinse		
Total Well Depth	192 ft	**Samplers:**	CC/SLB	**Notes:**	
Screen Length	10 ~~[illegible]~~ ft	**Weather Conditions:**	Sunny, Hot, 80's		
Pump Intake	187 ft	**Equipment:**	Drop Tube Low Flow Set up		

Stabilized: Drawdown <0.3 feet; pH ± 0.1 SU; Specific Conductance ± 3%; Temperature ± 3%; DO ± 0.2 mg/l or 10%; Turbidity ± 10% for values greater than 10 NTU; ORP ± 10 mV

Instrument Calibration Information

pH Meter Calibration			Horiba U-52 Calibration
pH 7.00 Std.	pH 4.01 Std.	Sl. (mV/pH)	Notes on calibration:
NA	NA	NA	Calibrated to manufacturer's specifications using calibration standard solutions
Air temp =	75 ~~100~~ °F		

Well Purging Information Start purge: 0848 End purge: 0947 Pump Type: Bladder

Time	DTW	T (°C)	pH	ORP/Eh (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/l) *	Flow Rate (mL/min)	Purge Volume (L)	Comments
0855	60.42	22.95	4.80	456	0.059	0.0	4.28	300		clear
0900	60.41	17.53	5.09	448	0.037	0.0	2.57	450		↓
0905	60.42	16.31	4.79	461	0.035	56.9	2.36	450		
0910	60.42	16.89	4.46	486	0.036	57.1	3.01	350		
0915	60.42	16.91	4.47	488	0.036	0.0	2.99	350		
0920	60.42	16.88	4.48	463	0.036	0.0	3.16	350		
0925	60.42	16.85	4.48	457	0.036	0.0	3.09	350		
0930	60.42	16.82	4.44	486	0.036	0.0	3.22	350		
0935	60.42	16.80	4.43	491	0.036	0.0	3.15	350		
0940	60.42	16.75	4.44	497	0.036	0.0	3.09	350		
0945	60.42	16.74	4.42	498	0.036	0.0	3.10	350		

1000 Collect sample

Laboratory Analysis Information

# of Bottles	Analytes	Collection Method	Preservative	Bottle Type	Anal. Lab.	Filtered	Sample Time	Comments
1	- SMMO - PPO (propane monooxygenase) - RMO (Toluene monooxygenase) - RDEG (Toluene monoxygenase)	Bladder Pump			Microbial Insights	N	1000	
6	- Alkalinity, Chloride, Sulfate - Sulfide - methane, Ethane, Ethene				Pace Analytical			

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Low-Flow Groundwater Sampling Monitoring Form

Well ID	MW-330-295	**Site ID:**	ROD-Flex OFFSite	**Sample Date:**	8/8/19
Well Diameter	2 in	**Sampling Event:**	MNA sampling 2019		
Depth to Water	131.14 ft	**Decon Procedures:**	Non-phosphate soap wash with DI water rinse		
Total Well Depth	295 ft	**Samplers:**	CC/SLB	**Notes:**	
Screen Length	10 ft	**Weather Conditions:**	Sunny, Hot 90's		
Pump Intake	290 ft	**Equipment:**	Drop Tube Low Flow Setup		

Stabilized: Drawdown <0.3 feet; pH ± 0.1 SU; Specific Conductance ± 3%; Temperature ± 3%; DO ± 0.2 mg/l or 10%; Turbidity ± 10% for values greater than 10 NTU; ORP ± 10 mV

Instrument Calibration Information

pH Meter Calibration			Horiba U-52 Calibration
pH 7.00 Std.	pH 4.01 Std.	SI. (mV/pH)	Notes on calibration:
NA	NA	NA	Calibrated to manufacturer's specifications using calibration standard solutions
Air temp =	90 ~~100~~ °F		

Well Purging Information — Start purge: 1440 — End purge: 1552 — Pump Type: Bladder

Time	DTW	T (°C)	pH	ORP/Eh (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/l) *	Flow Rate (mL/min)	Purge Volume (L)	Comments
1445	132.67	30.21	5.03	570	0.010	1.3	7.78	125		Clear
1450	132.68	30.45	4.87	487	0.013	8.5	3.99	125		
1455	132.68	29.06	4.62	502	0.011	20.9	4.53	125		
1500	132.68	24.39	4.50	526	0.011	28.7	4.16	125		
1505	132.68	24.07	4.42	528	0.010	30.4	3.90	125		
1510	132.68	23.91	4.31	533	0.010	29.1	4.18	125		
1515	132.68	23.87	4.29	535	0.010	33.6	3.93	125		
1520	132.68	23.27	4.25	538	0.010	33.7	3.79	125		
1525	132.68	23.45	4.22	522	0.010	26.8	3.92	125		
1530	132.68	23.58	4.20	520	0.011	26.1	4.01	125		
1535	132.68	23.56	4.20	520	0.011	25.0	3.86	125		
1540	132.68	23.62	4.18	516	0.011	24.4	4.17	125		
1545	132.68	23.69	4.19	512	0.011	25.0	4.13	125		
1550	132.68	23.67	4.18	511	0.011	23.6	4.29	125		
1615	Collect Sample									

Laboratory Analysis Information

# of Bottles	Analytes	Collection Method	Preservative	Bottle Type	Anal. Lab.	Filtered	Sample Time	Comments
	-SMMO				Microbial Insights	N	1615	
	-PPO (Propane monooxygenase)							
1	-RMO (Toluene monooxygenase)							
	-RDEG (Toluene monooxygenase)							
	-Alkalinity, Chloride, Sulfate				Pace Analytical			
6	-Sulfide							
	-Methane, Ethane, Ether							