

July 19, 2016

Ms. Richelle Hanson, Project Manager
Land Restoration Program
Land Management Administration
Maryland Department of the Environment
1800 Washington Boulevard, Suite 625
Baltimore, Maryland 21230-1719

Re: HydraSleeve Field Demonstration Study
Former Kop-Flex Facility Property, Hanover, Anne Arundel County, Maryland
Brownfield Master Inventory Number MD0286

Dear Ms. Hanson:

WSP USA Corp. (WSP) is providing this report presenting the results of the HydraSleeve field demonstration study conducted at the Former Kop-Flex facility property, which is currently owned by TC Harmans, LLC (the "Site"), in Hanover, MD. The primary objective of the field study was to gather data to assess the performance of the HydraSleeve sampling device in obtaining representative groundwater samples to determine volatile organic compound (VOC) concentrations at the Site. The results of the field demonstration were evaluated to determine whether this sampling method would be appropriate for the long-term groundwater monitoring activities at the site.

Study Approach

Previous groundwater monitoring events at the Site have utilized both standard purge and low flow purging methods to collect samples for VOC analysis. Recent studies have indicated the effectiveness of passive, or no-purge, sampling technologies, such as the HydraSleeve sampler, which is a grab-sampling device that collects an "instantaneous" groundwater sample without the purging or mixing of water within the well. Salient findings concerning the effectiveness of the HydraSleeve sampler include its ability to (1) obtain data for site-related constituents of concern (COCs), including 1,4-dioxane, because the method involves the collection of a grab sample from the well screen and (2) collect representative samples from both low and high yield wells. The approach used to evaluate the applicability of this sampling method is discussed in Section 6 of Appendix H – Groundwater Monitoring Plan of the Response Action Plan (October 2015) and involves comparison of the results for samples collected in March 2016 using the HydraSleeve with data from semi-annual sampling events conducted between June 2012 and December 2015.

The remaining sections of this report provide a discussion of the field sampling activities and results, and an evaluation of the performance of the HydraSleeve device to obtain representative groundwater quality samples.

Sampling Activities

On March 7th, 2016, HydraSleeve samplers were deployed in 6 of the wells comprising the groundwater monitoring network for the surficial hydrogeologic unit, and 5 wells in the confined portion of the Lower Patapsco aquifer. The selected monitoring points are listed below and identified in Figure 1.

<u>Surficial Unit</u>	<u>Confined Lower Patapsco Aquifer</u>
MW-01 MW-16	MW-1D
MW-04 MW-18	MW-16D
MW-03	MW-21D
MW-09	MW-23D
	MW-24D

Sampling locations for the field demonstration test were selected to include wells that are screened in both low and high permeability aquifer materials and have data from a minimum of seven previous monitoring events. For the surficial unit, three of the proposed HydraSleeve test locations (MW-04, MW-09, and MW-16) are within the inferred limits of the VOC plume, with the three remaining wells (MW-01, MW-03, and MW-18) hydraulically cross-gradient or downgradient of the area of VOC affected groundwater. All of the selected wells in the confined portion of the Lower Patapsco aquifer are within the VOC plume.

The depth to water and total depth were measured for the selected wells prior to deployment of the HydraSleeve samplers. These field measurements were reviewed, along with the well construction information, to determine the target depths for placing the sampling device. A single, 2.5-foot long HydraSleeve sampler was placed down each well to collect groundwater samples for the field demonstration test. Each HydraSleeve sampler was attached to a weighted, nylon suspension tether and set at a pre-determined depth within the screen interval. The suspension line was then secured at the top of the well casing to ensure the sampler remained at the designated depth during the two-week re-stabilization period.

On March 21st, 2016, a groundwater sample was collected by removing the sampler from the well. The depth interval from which the samples were obtained in each well are provided in Table 1. Prior to sample collection, a clean multi-parameter field probe was inserted into the HydraSleeve for measurement of the following hydrogeochemical parameters:

- Temperature
- pH
- Specific conductivity

The field parameter measurements for each sample were documented in a field notebook and are provided in Table 2. All readings were consistent with field measurements from previous sampling events for the wells, including the anomalously high pH for the water in MW-16-50. The groundwater samples were then collected in the appropriate containers, which were packed on ice and shipped using chain of custody protocols to the Pace Analytical Services laboratory in Huntersville, North Carolina. The samples were analyzed for VOCs using US Environmental Protection Agency (EPA) SW-846 Test Method 8260B and 1,4-dioxane using modified USEPA Method 8260B with selective ion monitoring.

The field QC samples collected to assess the data quality during the sampling activities included of a trip blank, field duplicate and equipment blank. The equipment blank was used as a control sample to identify potential biases for any of the target analytes. This sample was collected by filling one, un-used sampler with deionized water, and then transferring water to the sample containers in the same manner as a groundwater sample.

HydraSleeve Groundwater Sampling Results

The analytical results for the HydraSleeve samples are summarized in Table 3. Copies of the certified laboratory analytical reports are included in Enclosure A. The Hydrasleeve samples most commonly contained the following VOCs, which are the principal chemicals of concern (COCs) at the Site:

- 1,1,1-Trichloroethane (TCA)
- 1,1-Dichloroethane (DCA)
- 1,1-Dichloroethene (DCE)
- 1,4-Dioxane

No VOCs were detected in the equipment blank collected during the field sampling activities. Based on these results, samples collected using the HydraSleeve do not present any inherent biases for any of the target analytes.

VOCs detected above the Maryland Groundwater Quality Standards (GWQS) included 1,1,1-TCA and its degradation products (1,1-DCA, 1,2-DCA and 1,1-DCE) and the chlorinated ethenes tetrachloroethene (PCE) and trichloroethene (TCE). In addition, 1,4-dioxane was detected at concentrations above MDE's recommended risk-based level in drinking water of 6.7 micrograms per liter. An overall comparison of results for historical samples collected using conventional methods as opposed to samples obtained using the HydraSleeve shows minimal difference with respect to exceedences of the GWQS. The HydraSleeve results for 1,1-DCA in MW-24D-128 was the only instance where a constituent was below criteria in a well where it had previously been above criteria. However, it is important to note that previous sampling at this location has fluctuated above and below criteria. The HydraSleeve sampling method should have little effect on the shape and size of the plume.

Evaluation of HydraSleeve Sampling Results

Comparison of VOC Concentrations and Data Plots

Data from seven previous sampling events was compiled to use as a basis of comparison to the Hydrasleeve sampling method data. The data covers semi-annual sampling events between June of 2012 and June of 2015. The June 2012 through June 2014 sampling events were all conducted using a standard purge method, where three to five well volumes were removed from the well to ensure that the sample was representative of the water in the aquifer. Since the standard purge method generates large quantities of purge water, it was replaced by the low-flow sampling method with the shutdown of the Area 1 system in late 2013. During the December 2014 and June 2015 events, low-flow sampling methods were performed on wells MW-1D-112, MW-04-38, MW-16-50, MW-16D-100, MW-21D-102, MW-23D-92, and MW-24D-128. The standard purge method was used in place of the low-flow procedure for the remaining wells (MW-01-36, MW-03-25.5, MW-09-25, and MW-18-56) due to low well yield. Even though both the standard purge and low flow methods have been used, the majority of the samples collected during the 2012 through 2015 monitoring events utilized the standard purge procedure. The historical analytical results (including duplicates) for the June 2012 to June 2015 are provided in Enclosure B.

The evaluation of the sampling results focused on the primary VOCs of concern at the site, which include the following:

- 1,1,1-TCA
- 1,1-DCA
- 1,1-DCE
- 1,4-Dioxane

Table 4 presents a comparison of the concentration data from the June 2012 through June 2015 low-flow and standard purge sampling events with the results of the HydraSleeve samples. For each well, mean and median concentrations were calculated for each constituent based on the 2012-2015 monitoring events. Data for samples collected using both the standard purge and low-flow methods were combined to generate single values representative of VOC concentrations at each well location that could be compared with the single HydraSleeve sample result. Overall, samples obtained using the conventional sampling methods typically have higher concentrations of the primary VOCs in both shallow and deep wells. A closer examination of the data indicates the concentrations in samples collected using the low-flow and HydraSleeve methods were typically lower than the standard purge sample results.

A graphical comparison of the data obtained using the different sampling methods is depicted in the plots for total VOCs (Figure 2) and primary site-specific VOCs (Figures 3 through 6). For these plots, each point compares the concentration detected in the March 2016 HydraSleeve sample to the arithmetic mean for the traditional (standard purge and low-flow purge) samples obtained from the June 2012 through June 2015 monitoring events. The error bars shown in the graphs indicate the range of values for the standard purge and low-flow samples. Overall, the plots indicate generally good equivalency between the data obtained from each sampling method, although there is a general tendency toward lower VOC concentrations in the HydraSleeve samples compared to the mean values for the combined low-flow and standard purge samples. The wells that consistently have both the concentration mean and range lie below the equal concentration line include MW-09 in the surficial zone and MW-1D and MW-21D in the deeper confined zone. Conversely, the mean and range for the MW-04 samples typically plot above the 1:1 line, indicating the tendency for higher concentrations in the HydraSleeve sample compared to the standard purge and low-flow results.

Median Percent Difference

For each constituent, the Relative Percent Difference (RPD) was calculated for each traditional sampling method – HydraSleeve sampling method data pair using the following equation:

$$RPD = 100 * \frac{(A-B)}{[(A+B)/2]}$$

Where:

- A = mean concentration for samples collected using the standard purge and low-flow methods; and
- B = concentration from sample collected using the HydraSleeve method

After calculating the individual RPD values, the median of the RPDs was determined by ranking the values from lowest to highest and selecting the middle value in the ranked set. The median RPD serves as a quantitative measure of the similarity between the sampling methods. A positive median RPD value indicates the concentrations in samples obtained using conventional groundwater sampling methods is frequently greater than the concentration in the HydraSleeve sample from the same well, while a negative value indicates the converse situation. Additionally, median RPD values approaching zero indicate the different sampling methods will tend to provide similar results, whereas higher values will indicate the results for one sampling method differ significantly from the other method. For this evaluation, median RPDs greater than 25% or less than -25% were considered to be indicative of a condition where the conventional sampling methods were more likely to provide a significantly higher, or lower, concentration than the passive sampler. This value is similar to RPD criteria that have been previously used to evaluate bias in laboratory analytical data for groundwater samples.

Table 5 includes the results of the median RPD analysis for the primary VOCs of concern at the site. The positive median RPD values indicate concentrations for these constituents are higher in samples collected using the standard purge and low-flow methods compared to the HydraSleeve sampler. The values for 1,1-DCA (20.4%) and 1,1-DCE (23.7%) indicate the different sampling methods return similar concentrations, while the higher values for 1,4-dioxane (34%) and 1,1,1-TCA (41.5%) indicate a meaningful difference in the concentrations. Based on this analysis, the greatest apparent discrepancies in sample concentrations are associated with 1,1,1-TCA and 1,4-dioxane.

Tarone-Ware Two-Sample Test

The Tarone-Ware Two-Sample Test for Censored Data (Tarone-Ware Test) was performed to determine if the mean analytical results for samples collected using conventional methods and results for the 2016 HydraSleeve samples represent different populations. This test is a non-parametric hypothesis testing procedure that is used on data sets where the presence of non-detect measurements may impact the applicability of other comparison methods such as the Wilcoxon Rank-Sum Test. Based on the previous sampling results, both conventional method and HydraSleeve samples collected from a small number of monitoring wells screened in the surficial groundwater zone are characterized by non-detect concentrations for the primary VOCs of concern at the site. Using this method, a Tarone-Ware test statistic is calculated along with a critical point value at the selected significance level. Comparison of the test statistic with the critical point value was used to determine whether the measurements represent two different populations.

The results of the Tarone-Ware test analyses are summarized in Table 5. The values presented represent the confidence level that the samples collected using the different methods satisfy the null hypothesis – i.e., the concentrations in the standard purge and low-flow samples and HydraSleeve samples are similar. For this evaluation, if the confidence level was greater than 90%, it was concluded the two populations were identical at a statistically significant level. Using a 90% confidence level, the test shows the concentrations for 1,1-DCA, 1,1-DCE, and 1,4-dioxane in the HydraSleeve samples are statistically similar to the previous results for samples collected by conventional sampling methods. Evaluation of 1,1,1-TCA indicates the concentrations in the HydraSleeve samples are different when compared to the previous sampling results.

Sampler Assessment and Recommendation

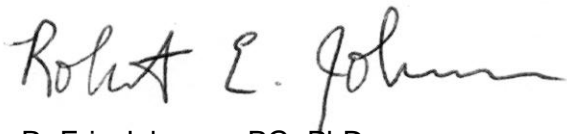
An overall qualitative assessment of the sampling data for the primary site-related VOCs was performed using the statistical (Tarone-Ware) and quantitative (median RPD) test results and an evaluation of the data plots. The resulting determination is indicated under the column “Evaluation Conclusion” in Table 5. Even though the 1,1-DCA and 1,1-DCE concentrations were typically higher in samples collected using conventional (standard or low-flow purging) methods compared to the HydraSleeve, the results of the quantitative (median RPD) and statistical (Tarone-Ware) tests indicate general similarity in the sample results. Therefore, the observation that HydraSleeve results are consistent with the previous monitoring data is deemed valid for these compounds. Comparison of the concentration data and test results are also consistent for 1,1,1-TCA, but in a manner that shows a difference between the sampling methods. For 1,4-dioxane, the comparison is less straight-forward due to the variability in the findings from the quantitative and statistical tests. Given these results, it was concluded the 1,4-dioxane concentrations tend to be approximately similar, although slightly higher in samples collected using either the standard purge or low-flow purging methods as opposed to the HydraSleeve. This difference between the conventional and HydraSleeve samples may be due to the fact that the samples were derived from highly permeable sandy deposits, where the purging rate could result in increased mass transport toward the monitoring point, and thus samples with higher VOC concentrations than samples

collected using the HydraSleeve which are more representative of natural (i.e., non-pumping) groundwater flow conditions.

The presence of higher VOC concentrations in the HydraSleeve sample from well MW-04 is believed to reflect the presence of silt and clay and clayey sand layers in the portion of the aquifer screened by this well. These layers of fine-grained deposits represent zones of sluggish groundwater flow, which can allow for the storage of dissolved and adsorbed mass. The presence of this localized aquifer heterogeneity results in higher VOC concentrations in the HydraSleeve sample, primarily because this sample includes contributions from both the mobile fraction and diffuse VOC mass stored within clayey materials while low-flow and standard purge samples would largely reflect mobile VOCs moving through the primary flow zones.

Using a broad weight-of-evidence approach, WSP concludes that VOC concentrations in the HydraSleeve samples appear to be similar to the concentrations detected in the standard purge and low-flow samples. Given this conclusion, WSP recommends the use of the HydraSleeve sampling device for the long-term groundwater monitoring program at the site.

Sincerely yours,



R. Eric Johnson, PG, PhD
Senior Technical Manager

REJ:rjw:kjb

Enclosures

cc/encl.: Erich Weissbart, U.S. Environmental Protection Agency, Region III
Stephen Clarke, EMERSUB 16 LLC
Raymond Goins, Trammell Crow, Inc.
Michael Bell, ECS – Mid-Atlantic, Inc.

Figures

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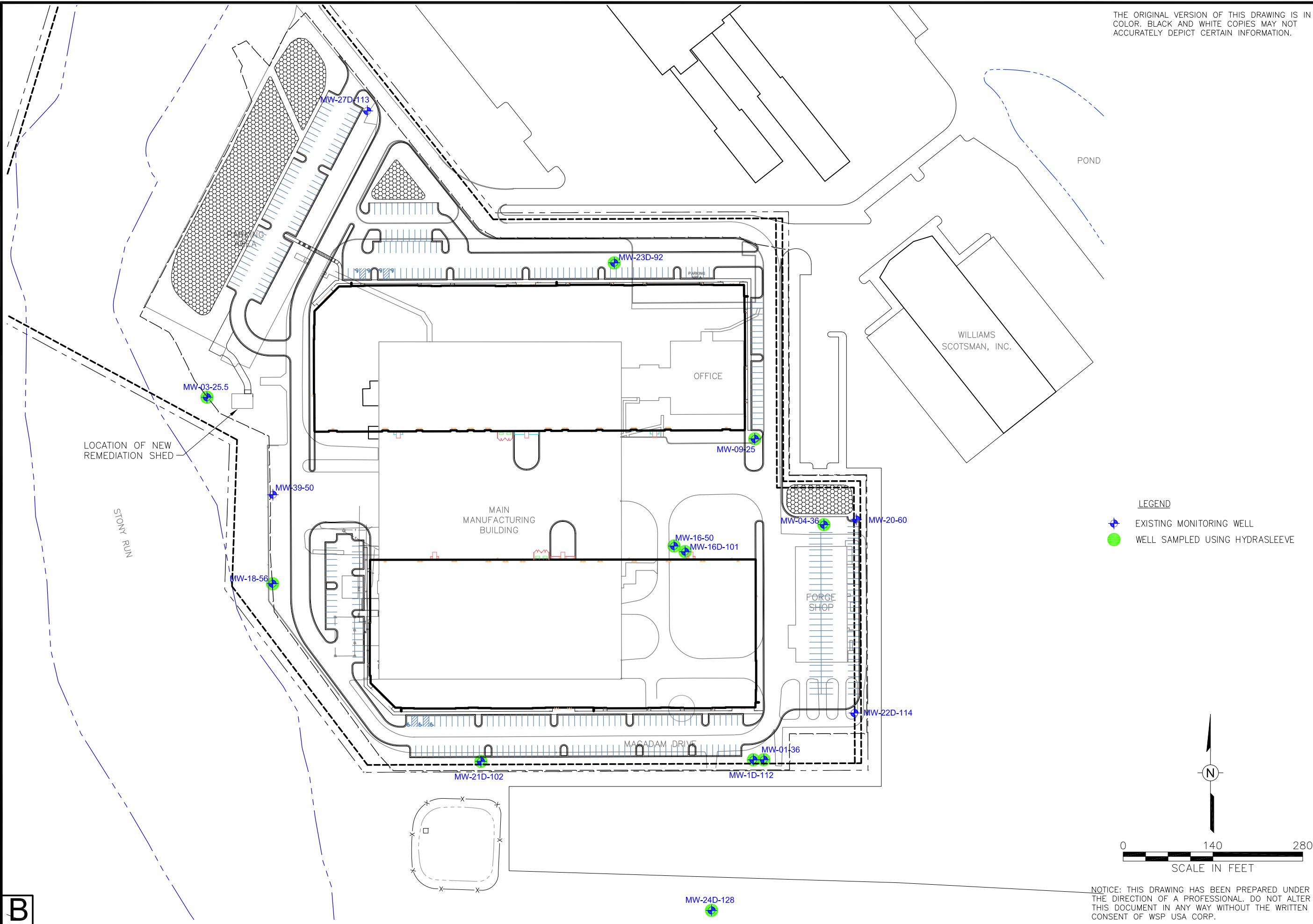
Drawn By: EGC
Checked: RJW 6/17/2016
Approved: RJW
DWG Name: 00003705-285

FORMER KOPFLEX FACILITY
HANOVER, MARYLAND
PREPARED FOR
EMERSUB 16 LLC
ST. LOUIS, MISSOURI

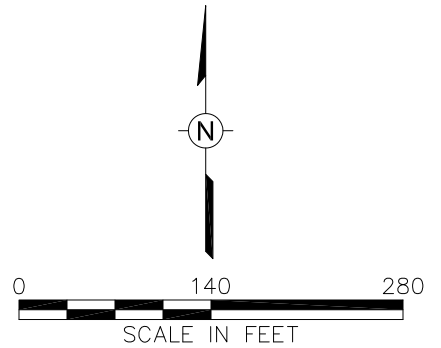
Figure 1
MONITORING WELLS SELECTED FOR DEPLOYMENT
OF HYDRASLEEVE SAMPLERS FOR FIELD
DEMONSTRATION TEST

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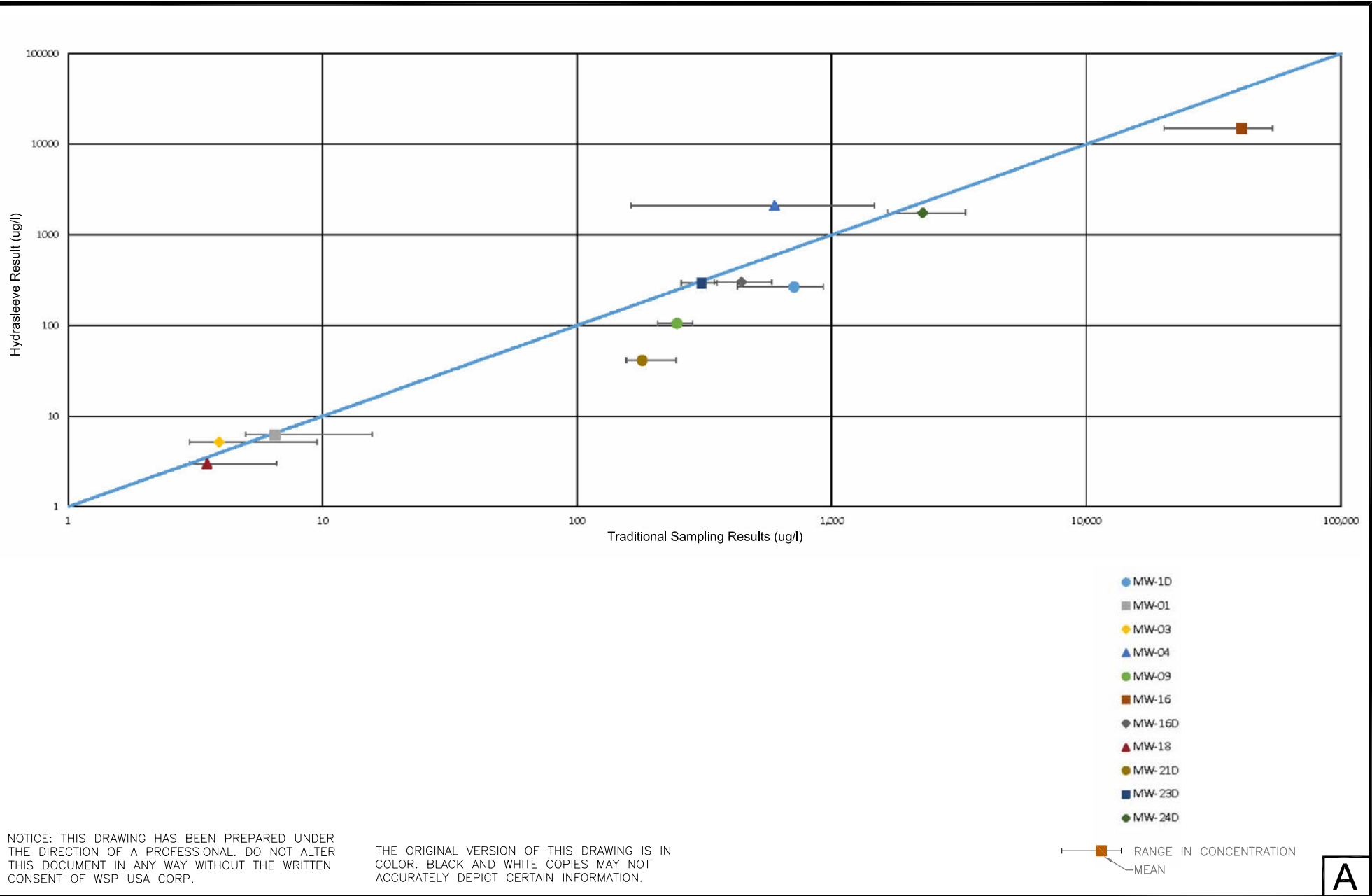


LEGEND
EXISTING MONITORING WELL
WELL SAMPLED USING HYDRASLEEVE

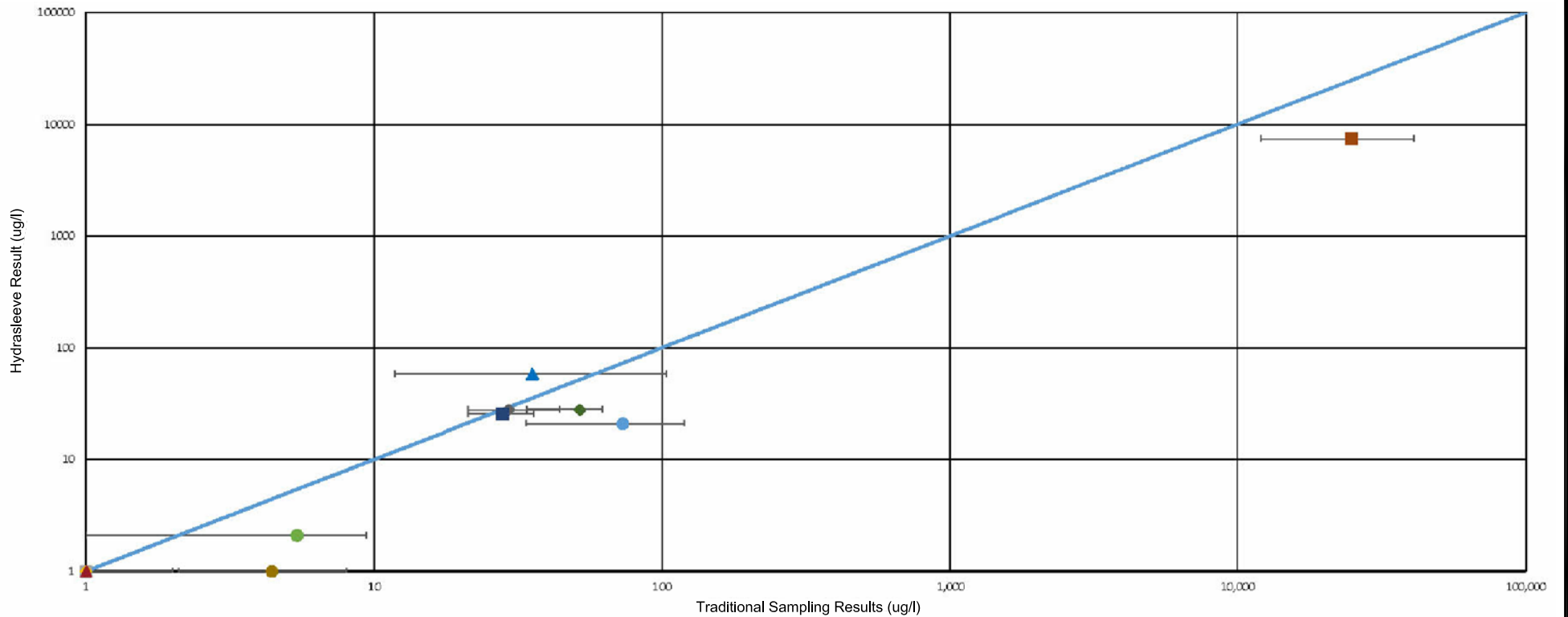


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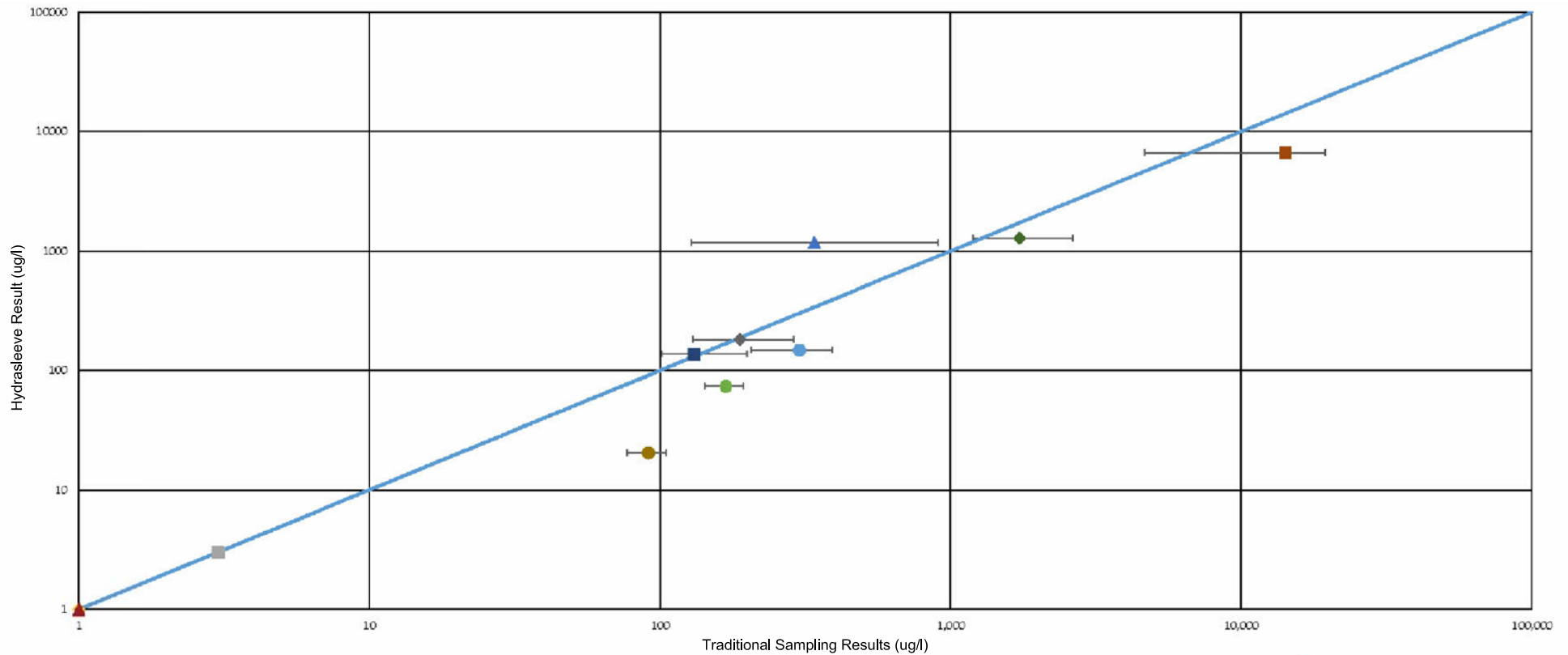
- MW-1D
- MW-01
- MW-03
- ▲ MW-04
- MW-09
- MW-16
- ◆ MW-16D
- ▲ MW-18
- MW-21D
- MW-23D
- MW-24D

—■— RANGE IN CONCENTRATION
 —●— MEAN

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- MW-1D
- MW-01
- MW-03
- ▲ MW-04
- MW-09
- MW-16
- ◆ MW-16D
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- MW-21D
- MW-23D
- MW-24D

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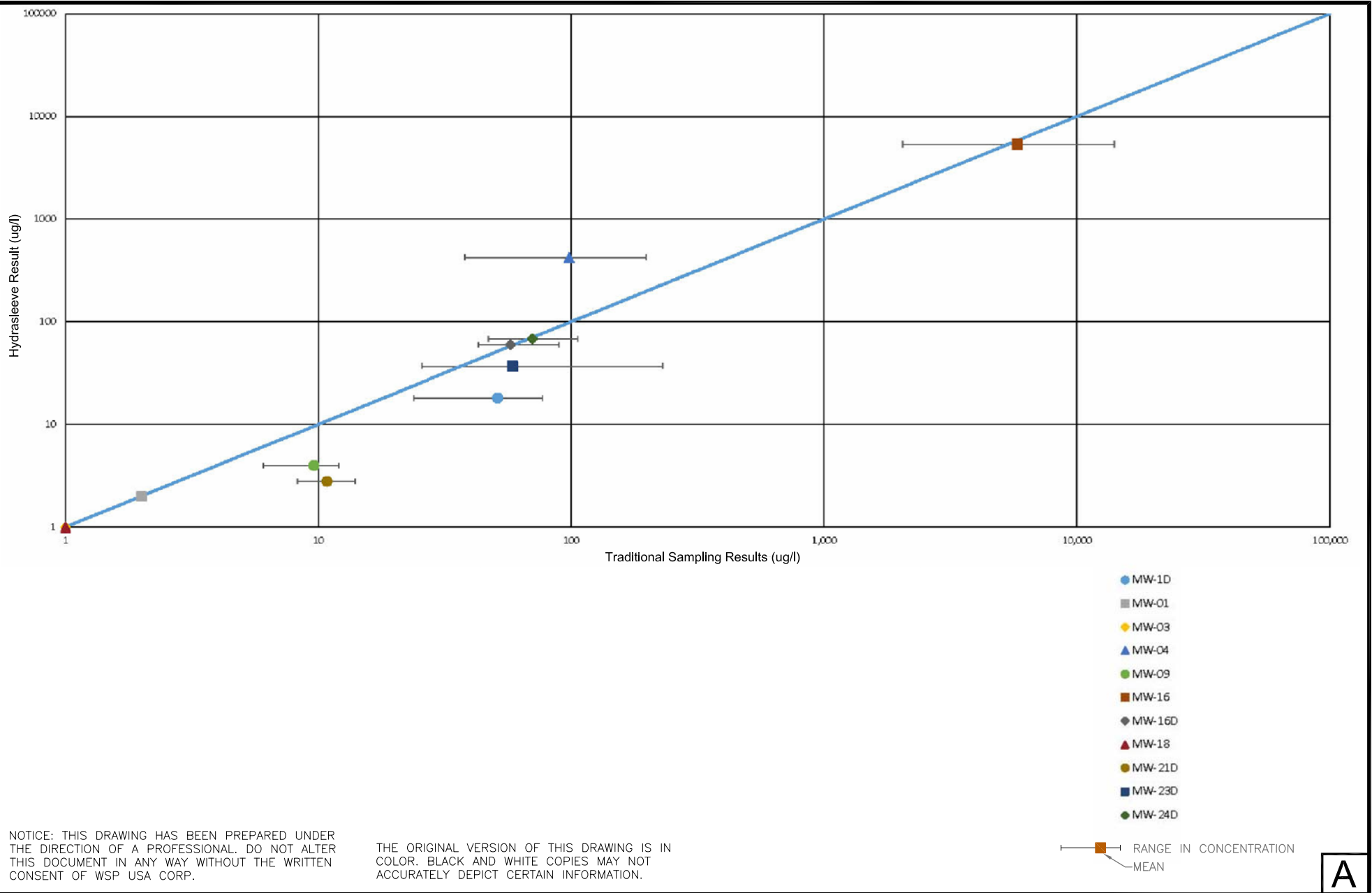
Figure 4

COMPARISON OF 1,1-DCE IN HYDRASLEEVE SAMPLES AND PREVIOUS SEMI-ANNUAL GROUNDWATER SAMPLES (2012-2015)

FORMER KOP-FLEX FACILITY
 HANOVER, MARYLAND

PREPARED FOR
 EMERSUB 16 LLC
 ST. LOUIS, MISSOURI

Drawn By: EGC
 Checked: *RJW* 6/17/2016
 Approved: *RJW*
 DWG Name: 00003705-286



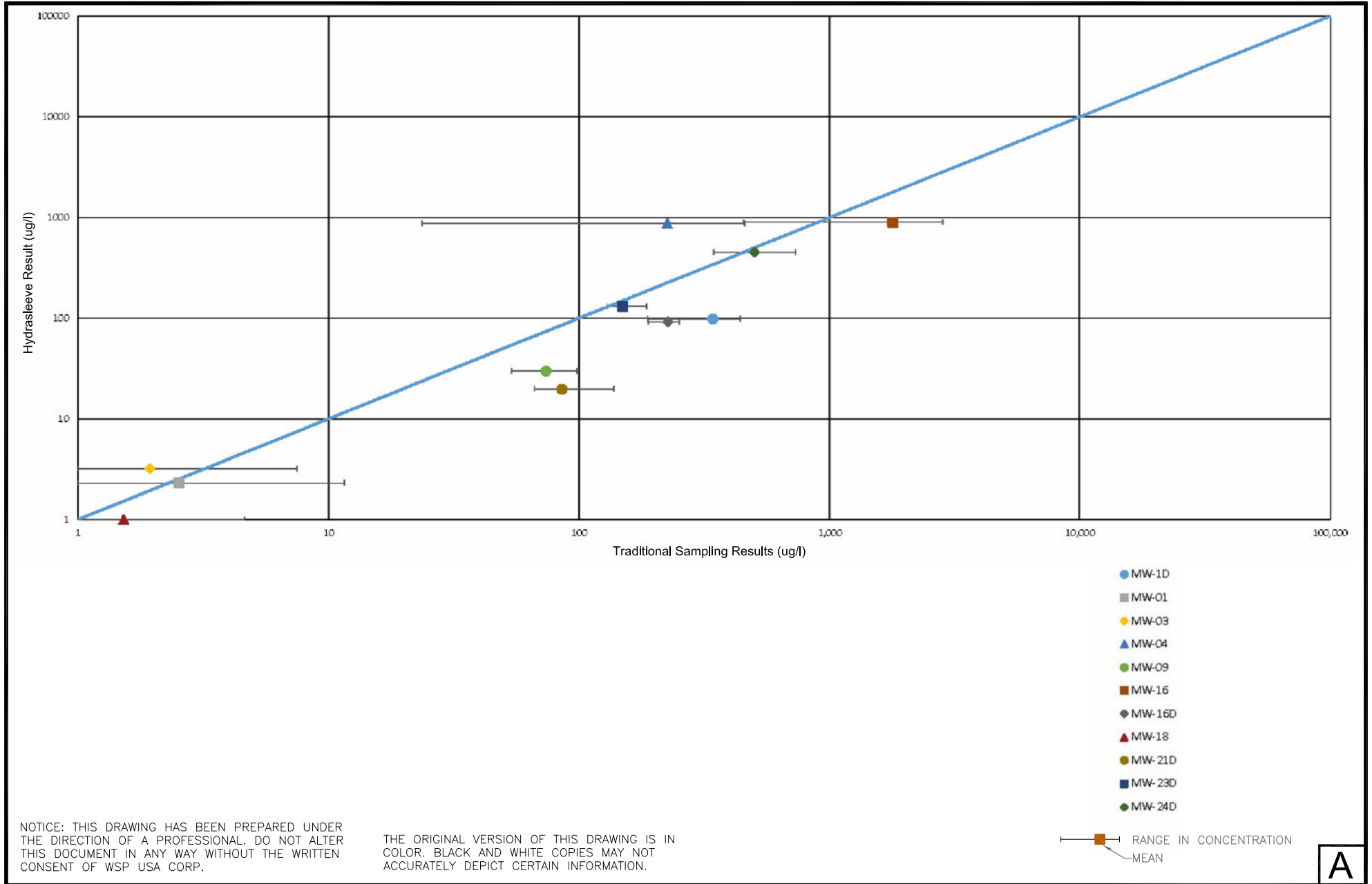
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Figure 5
 COMPARISON OF 1,1-DCA IN HYDRASLEEVE
 SAMPLES AND PREVIOUS SEMI-ANNUAL
 GROUNDWATER SAMPLES (2012-2015)

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

Drawn By: EGC
 Checked: *RJW* 6/17/2016
 Approved: *RJW*
 DWG Name: 00003705-286



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WSP PARSONS BRINCKERHOFF WSP USA Corp. 13530 Dulles Technology Drive, Suite 300 Herndon, Virginia 20171 (703) 709-6500 www.wspgroup.com/usa	Figure 6 COMPARISON OF 1,4-DIOXANE IN HYDRASLEEVE SAMPLES AND PREVIOUS SEMI-ANNUAL GROUNDWATER SAMPLES (2012-2015)	FORMER KOP-FLEX FACILITY HANOVER, MARYLAND PREPARED FOR EMERSUB 16 LLC ST. LOUIS, MISSOURI	Drawn By: EGC Checked: <i>RJW 6/17/2016</i> Approved: <i>RJW</i> DWG Name: 00003705-286

Tables

Table 1

**HydraSleeve Sampling Information
Former Kop-Flex Facility Site
Hanover, Maryland
March 2016**

Well ID	Top of Casing Elevation (feet MSL)	Depth To Water (feet bgs)	Groundwater Elevation (feet MSL)	Well Depth (feet bgs)	Well Screened Interval (feet bgs)	HydraSleeve Sample Interval (feet bgs)
MW-01-33	133.312	17.49	115.82	33	23-33	25.5-28
MW-1D-112	129.672	39.61	90.06	112	102-112	104.5-107
MW-03-25.5	117.442	9.89	107.55	25.5	15.5-25.5	18-20.5
MW-04-38	129.102	13.75	115.35	38	28-38	30.5-33
MW-09-25	125.102	9.51	115.59	25	15-25	17.5-20
MW-16-50	123.792	32.96	90.83	50	40-50	42.5-45
MW-16D-100	123.912	39.09	84.82	100	90-100	92.5-95
MW-18-56	122.852	17.88	104.97	56	46-56	48.5-51
MW-21D-102	122.992	32.84	90.15	102	92-102	94.5-97
MW-23D-92	128.852	30.4	98.45	92	82-92	84.5-87
MW-24D-128	129.102	44.38	84.72	128	118-128	120.5-123

a/ MSL = mean sea level; bgs = below ground surface

Table 2

**HydraSleeve Sampling Field Parameters
Former Kop-Flex Facility Site
Hanover, Maryland
March 2016**

Well ID	Temperature (C)	pH	Specific Conductivity (mS/cm)
MW-01-33	12.60	5.29	0.24
MW-1D-112	13.80	4.49	0.04
MW-03-25.5	8.90	6.96	0.37
MW-04-38	12.90	6.22	0.40
MW-09-25	12.80	6.13	0.21
MW-16-50	13.30	11.94	3.24
MW-16D-100	14.40	4.54	0.15
MW-18-56	11.30	5.12	0.20
MW-21D-102	10.50	4.41	0.05
MW-23D-92	13.00	5.60	0.11
MW-24D-128	13.70	5.42	0.15

Table 3
HydraSleeve Groundwater Sample Results
Former Kop-Flex Facility Site
Hanover, Maryland
March 2016

Analyte (b)	Groundwater Quality Criteria (ug/L)	MW-01-33 3/21/2016	MW-1D-112 3/21/2016	MW-03-25.5 3/21/2016	MW-04-38 3/21/2016	MW-09-25 3/21/2016	MW-18-56 3/21/2016	MW-16-50 3/21/2016	MW-16D-100 3/21/2016	MW-21D-102 3/21/2016	MW-23D-92 3/21/2016	MW-24D-128 3/22/2016	MW-100 3/21/2016
Benzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.4	12.5 U	1 U
Chloroform	80	1 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U	1 U	1 U	12.5 U	1 U
Chloroethane	3.6	1 U	1 U	1 U	1 U	1 U	1 U	176	1 U	1 U	1 U	12.5 U	1 U
1,1,1-Trichloroethane	200	1 U	21	1 U	58.2	2.1	1 U	7,410	27.9	1 U	25.7	28.0	1 U
1,1-Dichloroethane	90	1 U	18.1	1 U	422	4	1 U	5,350	59.7	2.8	39.6	68.2	1 U
1,1-Dichloroethene	7	1 U	148	1 U	1,180	74	1 U	6,660	182	20.5	138	1,280	1 U
1,2-Dichloroethane	5	1 U	1.9	1 U	10.1	1 U	1 U	1 U	2.8	1 U	1.9	12.5 U	1 U
Trichloroethene	5	1 U	1 U	1 U	10.9	1 U	1 U	68.2	1.1	1 U	1 U	12.5 U	1 U
1,4-Dioxane	6.7 (d)	2.3	98.9	3.2	878	29.9	2 U	903	92.1	19.8	131	452	2 U
Tetrachloroethene	5	1 U	1 U	1 U	5.3	1 U	1 U	1 U	1 U	1 U	1 U	12.5 U	1 U

a/ U = not detected at a concentration above the method detection limit

Bolded number indicates concentration above the groundwater quality criteria

b/ All concentrations in micrograms per liter (µg/l)

c/ Groundwater Quality Criteria sources:

RSLs: [http://www.mde.maryland.gov/assets/document/Final%20Update%20No%202.1%20dated%205-20-08\(1\).pdf](http://www.mde.maryland.gov/assets/document/Final%20Update%20No%202.1%20dated%205-20-08(1).pdf)

d/ Value represents MDE risk-based cleanup level.

Table 4

**Comparison of Traditional and HydraSleeve Sample Results
for Primary VOCs of Concern
Former Kop-Flex Facility Site
Hanover, Maryland
March 2016 (a)**

Well ID	Traditional Sampling Methods							HydraSleeve Method			
	Jun-12	Dec-12	Jul-13	Dec-13	Jun-14	Dec-14	Jun-15	Mean	Median	Range	Mar-16
MW-01-33											
1,1,1-TCA	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U
1,1-DCE	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	3 U
1,1-DCA	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	2 U
1,4-Dioxane	3 U	3 U	3 U	2 U	11.6	2 U	2 U	2.7	--	< 2 - 11.6	1 U
MW-1D-112											
1,1,1-TCA	96.0	120	98.8	62.4	62.4	35.8	33.7	72.7	62.4	33.7 - 120	21.0
1,1-DCE	310	380	389	288	320	209	206	300.3	310	206 - 389	148
1,1-DCA	63.0	77.0	70.9	45.2	45.7	34.0	23.8	51.4	45.7	23.8 - 77.0	18.1
1,4-Dioxane	430	422	439	290	326	279	187	339	326	187 - 439	98.9
MW-03-25.5											
1,1,1-TCA	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U
1,1-DCE	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U
1,1-DCA	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U
1,4-Dioxane	3 U	3 U	3 U	2 U	2 U	2 U	7.5	2.1	--	< 2 - 7.5	1 U
MW-04-38											
1,1,1-TCA	25.0	26.0	27.9	21.3	104	11.8	32.3	35.5	26	11.8 - 104	58.2
1,1-DCE	180	210	233	188	908	128	516	338	210	128 - 908	1180
1,1-DCA	68.0	100	108	67.0	198	38.2	108	98.2	100	38.2 - 198	422
1,4-Dioxane	158	188	232	178	456	24.0	332	224	188	24.0 - 456	878
MW-09-25											
1,1,1-TCA	6.0	5.5	6.4	4.6	1 U	9.4	4.9	5.4	5.5	< 1 - 9.4	2.1
1,1-DCE	160	150	170	181	193	179	143	168	170	143 - 193	74.0
1,1-DCA	8.0	12.0	10.9	10.5	8.5	11.1	6.1	9.6	10.5	6.1 - 12.0	4.0
1,4-Dioxane	71.0	69.0	70.0	98.0	54.0	96.0	59.0	73.9	70	54.0 - 98.0	29.9
MW-16-50											
1,1,1-TCA	41,000	30,000	29,400	12,000	30,500	15,000	14,700	24,657	29,400	12,000 - 41,000	7,410
1,1-DCE	11,000	14,000	17,900	19,400	16,400	4,670	15,700	14,153	15,700	4,670 - 19,400	6,660
1,1-DCA	4,300	14,000	3,600	2,050	3,850	5,910	6,820	5,790	4,300	2,050 - 14,000	5,350
1,4-Dioxane	2,050	1,740	2,260	2,840	1,570	451	1,600	1,787	1,740	451 - 2,840	903
MW-16D-100											
1,1,1-TCA	33.0	29.0	23.8	21.3	28.9	44.3	25.6	29.4	28.9	21.3 - 44.3	27.9
1,1-DCE	150	130	193	155	191	288	209	188	191	130 - 288	182
1,1-DCA	49.0	55.0	54.0	43.0	58.0	90.0	54.0	57.6	54.0	43.0 - 90.0	59.7
1,4-Dioxane	215	189	246	218	232	251	225	225	225	189 - 251	92.1
MW-18-56											
1,1,1-TCA	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U
1,1-DCE	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U
1,1-DCA	5 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	1 U
1,4-Dioxane	3 U	3 U	3 U	2 U	2 U	2 U	2 U	--	--	--	1 U
MW-21D-102											
1,1,1-TCA	8.0	5.7	5.0	4.1	2.8	3.2	2.1	4.4	4.1	2.1 - 8.0	1 U
1,1-DCE	90.0	90.0	102	82.4	76.5	105	89.2	90.7	90.0	76.5 - 105	20.5
1,1-DCA	12.0	14.0	11.9	10.1	8.3	10.4	8.8	10.8	10.4	8.3 - 14.0	2.8
1,4-Dioxane	84.0	82.0	80.0	70.0	77.0	138	66.0	85.3	80.0	66.0 - 138	19.8
MW-23D-92											
1,1,1-TCA	36.0	31.0	28.6	21.3	24.7	26.5	27.3	27.9	27.3	21.3 - 36.0	25.7
1,1-DCE	120	110	131	101	101	157	198	131	120.0	101 - 198	138
1,1-DCA	229	32.0	33.0	26.0	29.0	28.0	35.0	58.9	32.0	26.0 - 229	36.9
1,4-Dioxane	149	130	186	165	132	151	131	149	149	130 - 186	131
MW-24D-128											
1,1,1-TCA	60.0	62.0	48.7	34.1	43.4	60.9	53.3	51.8	53.3	34.1 - 62.0	28.0
1,1-DCE	1,600	1,500	1,520	1,190	1,510	2,640	2,100	1,723	1,520	1,190 - 2,640	1,280
1,1-DCA	72.0	61.0	58.0	47.0	57.0	106	93.0	70.6	61.0	47.0 - 106	68.2
1,4-Dioxane	342	393	470	433	488	657	728	502	470	342 - 728	452

a/ U = not detected at a concentration above the method reporting limit
All concentrations in micrograms per liter.

Table 5

**Statistical Summary for Primary VOCs
HydraSleeve Field Demonstration
Former Kop-Flex Facility Site
Hanover, Maryland**

Contiuent of Concern	Instances Where Conventional Samples > HydraSleeve	Instances Where Conventional Samples < HydraSleeve	Instances Where Previous Samples = HydraSleeve Sample	Tarone-Ware Two-Sample Test (a)	Median Relative Percent Difference (b,c)	Evaluation Conclusion (d)
1,1,1-Trichloroethane	7	1	0	84.3%	41.5%	Conventional > HydraSleeve
1,1-Dichloroethane	7	1	0	91.8%	20.4%	Conventional = HydraSleeve
1,1-Dichloroethene	6	2	0	93.3%	23.7%	Conventional = HydraSleeve
1,4-Dioxane	9	2	0	91.0%	34.0%	Conventional ≈ HydraSleeve

a/ Value is the confidence that the sample populations are statistically similar. Values below 90 % are gray-shaded indicating that the two populations compared are statistically different.

b/ A positive value indicates the mean concentrations in samples collected using conventional methods are greater than the concentrations in HydraSleeve samples.

c/ Values between -25 and 25 indicate the sample populations are similar.

Vaules less than -25 and greater than 25, and gray-shaded indicate the sample populations are different.

d/Qualitative holistic statement regarding the similarity in the sample results based on an assessment of the statistical and quantitative comparative tests.

Enclosure A – Laboratory Analytical Reports for HydraSleeve Groundwater Samples (March 2016)

March 29, 2016

Eric Johnson
WSP Environmental Strategies
11190 Sunrise Valley Dr.
Suite #300
Reston, VA 20191

RE: Project: KOP-FLEX 3705-29
Pace Project No.: 92290859

Dear Eric Johnson:

Enclosed are the analytical results for sample(s) received by the laboratory on March 22, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,



Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Keith Green, WSP Environmental Strategies



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: KOP-FLEX 3705-29
Pace Project No.: 92290859

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92290859001	MW-100-HS	Water	03/21/16 07:45	03/22/16 09:40
92290859002	MW-18-56-HS	Water	03/21/16 08:00	03/22/16 09:40
92290859003	MW-03-25.5-HS	Water	03/21/16 08:30	03/22/16 09:40
92290859004	MW-23D-92-HS	Water	03/21/16 09:05	03/22/16 09:40
92290859005	MW-21D-102-HS	Water	03/21/16 10:00	03/22/16 09:40
92290859006	MW-1D-112-HS	Water	03/21/16 10:15	03/22/16 09:40
92290859007	MW-01-33-HS	Water	03/21/16 10:35	03/22/16 09:40
92290859008	MW-04-38-HS	Water	03/21/16 10:48	03/22/16 09:40
92290859009	MW-09-25-HS	Water	03/21/16 12:02	03/22/16 09:40
92290859010	MW-16-50-HS	Water	03/21/16 12:15	03/22/16 09:40
92290859011	MW-16D-100-HS	Water	03/21/16 12:35	03/22/16 09:40
92290859012	TRIP BLANKS	Water	03/21/16 00:00	03/22/16 09:40
92290859013	EB-032116	Water	03/21/16 16:15	03/22/16 09:40

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SAMPLE ANALYTE COUNT

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92290859001	MW-100-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859002	MW-18-56-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859003	MW-03-25.5-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859004	MW-23D-92-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859005	MW-21D-102-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859006	MW-1D-112-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859007	MW-01-33-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859008	MW-04-38-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859009	MW-09-25-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859010	MW-16-50-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859011	MW-16D-100-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859012	TRIP BLANKS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C
92290859013	EB-032116	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-100-HS		Lab ID: 92290859001	Collected: 03/21/16 07:45	Received: 03/22/16 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 04:15	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 04:15	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 04:15	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 04:15	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 04:15	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 04:15	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 04:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 04:15	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 04:15	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 04:15	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 04:15	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 04:15	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 04:15	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 04:15	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 04:15	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 04:15	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 04:15	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 04:15	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 04:15	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:15	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:15	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:15	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 04:15	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/16 04:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 04:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/16 04:15	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 04:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 04:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 04:15	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 04:15	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 04:15	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 04:15	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 04:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 04:15	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 04:15	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 04:15	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 04:15	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 04:15	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 04:15	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 04:15	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 04:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 04:15	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 04:15	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 04:15	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 04:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 04:15	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 04:15	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-100-HS		Lab ID: 92290859001		Collected: 03/21/16 07:45		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 04:15	127-18-4		
Toluene	ND	ug/L	1.0	1		03/25/16 04:15	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:15	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:15	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/16 04:15	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 04:15	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		03/25/16 04:15	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 04:15	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 04:15	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 04:15	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 04:15	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 04:15	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 04:15	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/25/16 04:15	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130	1		03/25/16 04:15	460-00-4		
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		03/25/16 04:15	17060-07-0		
Toluene-d8 (S)	97	%	70-130	1		03/25/16 04:15	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		03/22/16 19:41	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		03/22/16 19:41	17060-07-0		
Toluene-d8 (S)	101	%	50-150	1		03/22/16 19:41	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-18-56-HS	Lab ID: 92290859002	Collected: 03/21/16 08:00	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 02:36	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 02:36	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 02:36	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 02:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 02:36	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 02:36	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 02:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 02:36	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 02:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 02:36	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 02:36	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 02:36	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 02:36	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 02:36	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 02:36	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 02:36	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 02:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 02:36	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 02:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:36	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 02:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/16 02:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 02:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:36	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:36	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:36	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 02:36	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 02:36	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 02:36	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 02:36	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 02:36	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 02:36	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 02:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 02:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 02:36	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 02:36	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 02:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 02:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 02:36	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-18-56-HS		Lab ID: 92290859002		Collected: 03/21/16 08:00		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 02:36	127-18-4		
Toluene	ND	ug/L	1.0	1		03/25/16 02:36	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:36	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:36	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/16 02:36	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 02:36	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		03/25/16 02:36	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 02:36	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 02:36	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 02:36	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 02:36	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 02:36	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 02:36	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/25/16 02:36	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130	1		03/25/16 02:36	460-00-4		
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		03/25/16 02:36	17060-07-0		
Toluene-d8 (S)	109	%	70-130	1		03/25/16 02:36	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		03/22/16 19:59	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	50-150	1		03/22/16 19:59	17060-07-0		
Toluene-d8 (S)	103	%	50-150	1		03/22/16 19:59	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-03-25.5-HS		Lab ID: 92290859003	Collected: 03/21/16 08:30	Received: 03/22/16 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 02:52	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 02:52	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 02:52	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 02:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 02:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 02:52	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 02:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 02:52	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 02:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 02:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 02:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 02:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 02:52	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 02:52	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 02:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 02:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 02:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 02:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 02:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 02:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/16 02:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 02:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:52	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:52	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:52	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 02:52	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 02:52	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 02:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 02:52	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 02:52	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 02:52	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 02:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 02:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 02:52	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 02:52	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 02:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 02:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 02:52	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-03-25.5-HS	Lab ID: 92290859003	Collected: 03/21/16 08:30	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 02:52	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/16 02:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/16 02:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 02:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/25/16 02:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 02:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 02:52	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 02:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 02:52	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 02:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 02:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/25/16 02:52	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	97	%	70-130	1		03/25/16 02:52	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		03/25/16 02:52	17060-07-0	
Toluene-d8 (S)	104	%	70-130	1		03/25/16 02:52	2037-26-5	
8260 MSV SIM		Analytical Method: EPA 8260B Mod.						
1,4-Dioxane (p-Dioxane)	3.2	ug/L	2.0	1		03/22/16 20:18	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%	50-150	1		03/22/16 20:18	17060-07-0	
Toluene-d8 (S)	103	%	50-150	1		03/22/16 20:18	2037-26-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-23D-92-HS	Lab ID: 92290859004	Collected: 03/21/16 09:05	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 04:32	67-64-1	
Benzene	4.4	ug/L	1.0	1		03/25/16 04:32	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 04:32	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 04:32	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 04:32	75-27-4	R1
Bromoform	ND	ug/L	1.0	1		03/25/16 04:32	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 04:32	74-83-9	M1,R1
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 04:32	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 04:32	56-23-5	R1
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 04:32	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 04:32	75-00-3	R1
Chloroform	ND	ug/L	1.0	1		03/25/16 04:32	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 04:32	74-87-3	M1,R1
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 04:32	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 04:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 04:32	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 04:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 04:32	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 04:32	74-95-3	R1
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:32	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 04:32	75-71-8	M1,R1
1,1-Dichloroethane	39.6	ug/L	1.0	1		03/25/16 04:32	75-34-3	
1,2-Dichloroethane	1.9	ug/L	1.0	1		03/25/16 04:32	107-06-2	
1,1-Dichloroethene	138	ug/L	2.0	2		03/25/16 13:23	75-35-4	M1
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 04:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 04:32	156-60-5	M1,R1
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 04:32	78-87-5	R1
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 04:32	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 04:32	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 04:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 04:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 04:32	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 04:32	108-20-3	R1
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 04:32	123-91-1	M1,R1
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 04:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 04:32	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 04:32	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 04:32	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 04:32	75-09-2	R1
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 04:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 04:32	1634-04-4	R1
Naphthalene	ND	ug/L	1.0	1		03/25/16 04:32	91-20-3	R1
Styrene	ND	ug/L	1.0	1		03/25/16 04:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 04:32	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 04:32	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-23D-92-HS		Lab ID: 92290859004		Collected: 03/21/16 09:05		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 04:32	127-18-4		
Toluene	ND	ug/L	1.0	1		03/25/16 04:32	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:32	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 04:32	120-82-1		
1,1,1-Trichloroethane	25.7	ug/L	1.0	1		03/25/16 04:32	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 04:32	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		03/25/16 04:32	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 04:32	75-69-4	R1	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 04:32	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 04:32	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 04:32	75-01-4	R1	
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 04:32	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 04:32	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/25/16 04:32	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130	1		03/25/16 04:32	460-00-4		
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		03/25/16 04:32	17060-07-0		
Toluene-d8 (S)	100	%	70-130	1		03/25/16 04:32	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	131	ug/L	5.0	2.5		03/22/16 20:36	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	50-150	2.5		03/22/16 20:36	17060-07-0		
Toluene-d8 (S)	104	%	50-150	2.5		03/22/16 20:36	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-21D-102-HS	Lab ID: 92290859005	Collected: 03/21/16 10:00	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 03:09	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 03:09	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 03:09	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 03:09	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 03:09	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 03:09	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 03:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 03:09	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 03:09	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 03:09	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 03:09	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 03:09	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 03:09	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:09	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:09	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 03:09	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 03:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 03:09	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 03:09	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:09	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:09	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 03:09	75-71-8	
1,1-Dichloroethane	2.8	ug/L	1.0	1		03/25/16 03:09	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 03:09	107-06-2	
1,1-Dichloroethene	20.5	ug/L	1.0	1		03/25/16 03:09	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:09	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:09	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:09	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:09	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:09	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:09	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:09	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:09	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 03:09	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 03:09	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 03:09	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 03:09	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 03:09	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 03:09	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 03:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 03:09	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 03:09	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 03:09	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 03:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:09	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:09	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-21D-102-HS		Lab ID: 92290859005		Collected: 03/21/16 10:00		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 03:09	127-18-4		
Toluene	ND	ug/L	1.0	1		03/25/16 03:09	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:09	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:09	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/16 03:09	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 03:09	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		03/25/16 03:09	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 03:09	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 03:09	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 03:09	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 03:09	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 03:09	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 03:09	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/25/16 03:09	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130	1		03/25/16 03:09	460-00-4		
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		03/25/16 03:09	17060-07-0		
Toluene-d8 (S)	102	%	70-130	1		03/25/16 03:09	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	19.8	ug/L	2.0	1		03/22/16 21:31	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	50-150	1		03/22/16 21:31	17060-07-0		
Toluene-d8 (S)	103	%	50-150	1		03/22/16 21:31	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-1D-112-HS	Lab ID: 92290859006	Collected: 03/21/16 10:15	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		03/28/16 19:55	67-64-1	
Benzene	ND	ug/L	1.0	1		03/28/16 19:55	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/28/16 19:55	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/28/16 19:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/28/16 19:55	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/28/16 19:55	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/28/16 19:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/28/16 19:55	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/28/16 19:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/28/16 19:55	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/28/16 19:55	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/28/16 19:55	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/28/16 19:55	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/28/16 19:55	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/28/16 19:55	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/28/16 19:55	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/28/16 19:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/28/16 19:55	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/28/16 19:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:55	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/28/16 19:55	75-71-8	
1,1-Dichloroethane	18.1	ug/L	1.0	1		03/28/16 19:55	75-34-3	
1,2-Dichloroethane	1.9	ug/L	1.0	1		03/28/16 19:55	107-06-2	
1,1-Dichloroethene	148	ug/L	1.0	1		03/28/16 19:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/28/16 19:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/28/16 19:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/28/16 19:55	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/28/16 19:55	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/28/16 19:55	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/28/16 19:55	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/28/16 19:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/28/16 19:55	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/28/16 19:55	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/28/16 19:55	123-91-1	L2
Ethylbenzene	ND	ug/L	1.0	1		03/28/16 19:55	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/28/16 19:55	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/28/16 19:55	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/28/16 19:55	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/28/16 19:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/28/16 19:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/28/16 19:55	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/28/16 19:55	91-20-3	
Styrene	ND	ug/L	1.0	1		03/28/16 19:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/28/16 19:55	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/28/16 19:55	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-1D-112-HS		Lab ID: 92290859006		Collected: 03/21/16 10:15		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/28/16 19:55	127-18-4		
Toluene	ND	ug/L	1.0	1		03/28/16 19:55	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:55	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:55	120-82-1		
1,1,1-Trichloroethane	21.0	ug/L	1.0	1		03/28/16 19:55	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/28/16 19:55	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		03/28/16 19:55	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/28/16 19:55	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/28/16 19:55	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/28/16 19:55	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/28/16 19:55	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/28/16 19:55	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/28/16 19:55	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/28/16 19:55	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130	1		03/28/16 19:55	460-00-4		
1,2-Dichloroethane-d4 (S)	95	%	70-130	1		03/28/16 19:55	17060-07-0		
Toluene-d8 (S)	101	%	70-130	1		03/28/16 19:55	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	98.9	ug/L	5.0	2.5		03/22/16 21:49	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	50-150	2.5		03/22/16 21:49	17060-07-0		
Toluene-d8 (S)	103	%	50-150	2.5		03/22/16 21:49	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-01-33-HS	Lab ID: 92290859007	Collected: 03/21/16 10:35	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 03:25	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 03:25	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 03:25	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 03:25	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 03:25	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 03:25	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 03:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 03:25	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 03:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 03:25	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 03:25	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 03:25	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 03:25	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:25	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:25	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 03:25	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 03:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 03:25	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 03:25	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:25	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:25	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:25	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 03:25	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/16 03:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 03:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:25	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:25	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:25	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:25	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:25	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:25	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 03:25	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 03:25	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 03:25	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 03:25	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 03:25	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 03:25	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 03:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 03:25	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 03:25	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 03:25	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 03:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:25	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29
Pace Project No.: 92290859

Sample: MW-01-33-HS	Lab ID: 92290859007	Collected: 03/21/16 10:35	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 03:25	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/16 03:25	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:25	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:25	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/16 03:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 03:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/25/16 03:25	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 03:25	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 03:25	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 03:25	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 03:25	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 03:25	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 03:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/25/16 03:25	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%	70-130	1		03/25/16 03:25	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		03/25/16 03:25	17060-07-0	
Toluene-d8 (S)	76	%	70-130	1		03/25/16 03:25	2037-26-5	
8260 MSV SIM		Analytical Method: EPA 8260B Mod.						
1,4-Dioxane (p-Dioxane)	2.3	ug/L	2.0	1		03/22/16 22:08	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%	50-150	1		03/22/16 22:08	17060-07-0	
Toluene-d8 (S)	103	%	50-150	1		03/22/16 22:08	2037-26-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-04-38-HS	Lab ID: 92290859008	Collected: 03/21/16 10:48	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 03:42	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 03:42	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 03:42	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 03:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 03:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 03:42	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 03:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 03:42	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 03:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 03:42	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 03:42	75-00-3	
Chloroform	1.6	ug/L	1.0	1		03/25/16 03:42	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 03:42	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:42	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:42	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 03:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 03:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 03:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 03:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:42	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 03:42	75-71-8	
1,1-Dichloroethane	422	ug/L	10.0	10		03/25/16 13:06	75-34-3	
1,2-Dichloroethane	10.1	ug/L	1.0	1		03/25/16 03:42	107-06-2	
1,1-Dichloroethene	1180	ug/L	10.0	10		03/25/16 13:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:42	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 03:42	108-20-3	
1,4-Dioxane (p-Dioxane)	984	ug/L	150	1		03/25/16 03:42	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 03:42	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 03:42	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 03:42	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 03:42	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 03:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 03:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 03:42	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 03:42	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 03:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:42	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-04-38-HS		Lab ID: 92290859008		Collected: 03/21/16 10:48		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	5.3	ug/L	1.0	1		03/25/16 03:42	127-18-4		
Toluene	ND	ug/L	1.0	1		03/25/16 03:42	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:42	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:42	120-82-1		
1,1,1-Trichloroethane	58.2	ug/L	1.0	1		03/25/16 03:42	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 03:42	79-00-5		
Trichloroethene	10.9	ug/L	1.0	1		03/25/16 03:42	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 03:42	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 03:42	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 03:42	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 03:42	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 03:42	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 03:42	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/25/16 03:42	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130	1		03/25/16 03:42	460-00-4		
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		03/25/16 03:42	17060-07-0		
Toluene-d8 (S)	103	%	70-130	1		03/25/16 03:42	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	878	ug/L	20.0	10		03/24/16 09:40	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	50-150	5		03/22/16 22:27	17060-07-0		
Toluene-d8 (S)	103	%	50-150	5		03/22/16 22:27	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-09-25-HS		Lab ID: 92290859009	Collected: 03/21/16 12:02	Received: 03/22/16 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 03:59	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 03:59	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 03:59	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 03:59	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 03:59	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 03:59	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 03:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 03:59	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 03:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 03:59	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 03:59	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 03:59	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 03:59	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:59	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 03:59	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 03:59	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 03:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 03:59	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 03:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 03:59	75-71-8	
1,1-Dichloroethane	4.0	ug/L	1.0	1		03/25/16 03:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 03:59	107-06-2	
1,1-Dichloroethene	74.0	ug/L	1.0	1		03/25/16 03:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 03:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 03:59	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 03:59	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 03:59	108-20-3	
1,4-Dioxane (p-Dioxane)	418	ug/L	150	1		03/25/16 03:59	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 03:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 03:59	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 03:59	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 03:59	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 03:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 03:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 03:59	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 03:59	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 03:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 03:59	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29
Pace Project No.: 92290859

Sample: MW-09-25-HS		Lab ID: 92290859009		Collected: 03/21/16 12:02		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 03:59	127-18-4		
Toluene	ND	ug/L	1.0	1		03/25/16 03:59	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:59	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 03:59	120-82-1		
1,1,1-Trichloroethane	2.1	ug/L	1.0	1		03/25/16 03:59	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 03:59	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		03/25/16 03:59	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 03:59	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 03:59	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 03:59	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 03:59	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 03:59	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 03:59	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/25/16 03:59	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130	1		03/25/16 03:59	460-00-4		
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		03/25/16 03:59	17060-07-0		
Toluene-d8 (S)	101	%	70-130	1		03/25/16 03:59	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	29.9	ug/L	2.0	1		03/22/16 22:45	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	50-150	1		03/22/16 22:45	17060-07-0		
Toluene-d8 (S)	103	%	50-150	1		03/22/16 22:45	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-16-50-HS	Lab ID: 92290859010	Collected: 03/21/16 12:15	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	1250	50		03/28/16 20:45	67-64-1	
Benzene	ND	ug/L	50.0	50		03/28/16 20:45	71-43-2	
Bromobenzene	ND	ug/L	50.0	50		03/28/16 20:45	108-86-1	
Bromochloromethane	ND	ug/L	50.0	50		03/28/16 20:45	74-97-5	
Bromodichloromethane	ND	ug/L	50.0	50		03/28/16 20:45	75-27-4	
Bromoform	ND	ug/L	50.0	50		03/28/16 20:45	75-25-2	
Bromomethane	ND	ug/L	100	50		03/28/16 20:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	250	50		03/28/16 20:45	78-93-3	
Carbon tetrachloride	ND	ug/L	50.0	50		03/28/16 20:45	56-23-5	
Chlorobenzene	ND	ug/L	50.0	50		03/28/16 20:45	108-90-7	
Chloroethane	176	ug/L	50.0	50		03/28/16 20:45	75-00-3	
Chloroform	ND	ug/L	50.0	50		03/28/16 20:45	67-66-3	
Chloromethane	ND	ug/L	50.0	50		03/28/16 20:45	74-87-3	
2-Chlorotoluene	ND	ug/L	50.0	50		03/28/16 20:45	95-49-8	
4-Chlorotoluene	ND	ug/L	50.0	50		03/28/16 20:45	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	100	50		03/28/16 20:45	96-12-8	
Dibromochloromethane	ND	ug/L	50.0	50		03/28/16 20:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	50.0	50		03/28/16 20:45	106-93-4	
Dibromomethane	ND	ug/L	50.0	50		03/28/16 20:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	50.0	50		03/28/16 20:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0	50		03/28/16 20:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0	50		03/28/16 20:45	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	50		03/28/16 20:45	75-71-8	
1,1-Dichloroethane	5350	ug/L	50.0	50		03/28/16 20:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0	50		03/28/16 20:45	107-06-2	
1,1-Dichloroethene	6660	ug/L	50.0	50		03/28/16 20:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	50.0	50		03/28/16 20:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	50		03/28/16 20:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	50.0	50		03/28/16 20:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	50.0	50		03/28/16 20:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	50.0	50		03/28/16 20:45	594-20-7	
1,1-Dichloropropene	ND	ug/L	50.0	50		03/28/16 20:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	50.0	50		03/28/16 20:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	50.0	50		03/28/16 20:45	10061-02-6	
Diisopropyl ether	ND	ug/L	50.0	50		03/28/16 20:45	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	7500	50		03/28/16 20:45	123-91-1	L2
Ethylbenzene	ND	ug/L	50.0	50		03/28/16 20:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	50.0	50		03/28/16 20:45	87-68-3	
2-Hexanone	ND	ug/L	250	50		03/28/16 20:45	591-78-6	
p-Isopropyltoluene	ND	ug/L	50.0	50		03/28/16 20:45	99-87-6	
Methylene Chloride	ND	ug/L	100	50		03/28/16 20:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250	50		03/28/16 20:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	50.0	50		03/28/16 20:45	1634-04-4	
Naphthalene	ND	ug/L	50.0	50		03/28/16 20:45	91-20-3	
Styrene	ND	ug/L	50.0	50		03/28/16 20:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	50.0	50		03/28/16 20:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	50		03/28/16 20:45	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-16-50-HS								
Lab ID: 92290859010								
Collected: 03/21/16 12:15 Received: 03/22/16 09:40 Matrix: Water								
8260 MSV Low Level Analytical Method: EPA 8260								
Tetrachloroethene	ND	ug/L	50.0	50		03/28/16 20:45	127-18-4	
Toluene	ND	ug/L	50.0	50		03/28/16 20:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0	50		03/28/16 20:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0	50		03/28/16 20:45	120-82-1	
1,1,1-Trichloroethane	7410	ug/L	50.0	50		03/28/16 20:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0	50		03/28/16 20:45	79-00-5	
Trichloroethene	68.2	ug/L	50.0	50		03/28/16 20:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	50		03/28/16 20:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	50.0	50		03/28/16 20:45	96-18-4	
Vinyl acetate	ND	ug/L	100	50		03/28/16 20:45	108-05-4	
Vinyl chloride	ND	ug/L	50.0	50		03/28/16 20:45	75-01-4	
Xylene (Total)	ND	ug/L	100	50		03/28/16 20:45	1330-20-7	
m&p-Xylene	ND	ug/L	100	50		03/28/16 20:45	179601-23-1	
o-Xylene	ND	ug/L	50.0	50		03/28/16 20:45	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	50		03/28/16 20:45	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	50		03/28/16 20:45	17060-07-0	
Toluene-d8 (S)	99	%	70-130	50		03/28/16 20:45	2037-26-5	
8260 MSV SIM Analytical Method: EPA 8260B Mod.								
1,4-Dioxane (p-Dioxane)	903	ug/L	50.0	25		03/22/16 23:04	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	50-150	25		03/22/16 23:04	17060-07-0	
Toluene-d8 (S)	101	%	50-150	25		03/22/16 23:04	2037-26-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: MW-16D-100-HS	Lab ID: 92290859011	Collected: 03/21/16 12:35	Received: 03/22/16 09:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/28/16 19:39	67-64-1	
Benzene	ND	ug/L	1.0	1		03/28/16 19:39	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/28/16 19:39	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/28/16 19:39	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/28/16 19:39	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/28/16 19:39	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/28/16 19:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/28/16 19:39	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/28/16 19:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/28/16 19:39	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/28/16 19:39	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/28/16 19:39	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/28/16 19:39	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/28/16 19:39	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/28/16 19:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/28/16 19:39	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/28/16 19:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/28/16 19:39	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/28/16 19:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:39	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/28/16 19:39	75-71-8	
1,1-Dichloroethane	59.7	ug/L	1.0	1		03/28/16 19:39	75-34-3	
1,2-Dichloroethane	2.8	ug/L	1.0	1		03/28/16 19:39	107-06-2	
1,1-Dichloroethene	182	ug/L	2.0	2		03/25/16 05:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/28/16 19:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/28/16 19:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/28/16 19:39	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/28/16 19:39	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/28/16 19:39	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/28/16 19:39	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/28/16 19:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/28/16 19:39	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/28/16 19:39	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/28/16 19:39	123-91-1	L2
Ethylbenzene	ND	ug/L	1.0	1		03/28/16 19:39	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/28/16 19:39	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/28/16 19:39	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/28/16 19:39	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/28/16 19:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/28/16 19:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/28/16 19:39	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/28/16 19:39	91-20-3	
Styrene	ND	ug/L	1.0	1		03/28/16 19:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/28/16 19:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/28/16 19:39	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29
Pace Project No.: 92290859

Sample: MW-16D-100-HS		Lab ID: 92290859011		Collected: 03/21/16 12:35		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/28/16 19:39	127-18-4		
Toluene	ND	ug/L	1.0	1		03/28/16 19:39	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:39	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/28/16 19:39	120-82-1		
1,1,1-Trichloroethane	27.9	ug/L	1.0	1		03/28/16 19:39	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/28/16 19:39	79-00-5		
Trichloroethene	1.1	ug/L	1.0	1		03/28/16 19:39	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/28/16 19:39	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/28/16 19:39	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/28/16 19:39	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/28/16 19:39	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/28/16 19:39	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/28/16 19:39	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/28/16 19:39	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130	1		03/28/16 19:39	460-00-4		
1,2-Dichloroethane-d4 (S)	93	%	70-130	1		03/28/16 19:39	17060-07-0		
Toluene-d8 (S)	101	%	70-130	1		03/28/16 19:39	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	92.1	ug/L	5.0	2.5		03/22/16 23:22	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	50-150	1		03/24/16 09:58	17060-07-0		
Toluene-d8 (S)	104	%	50-150	1		03/24/16 09:58	2037-26-5		

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: TRIP BLANKS		Lab ID: 92290859012	Collected: 03/21/16 00:00	Received: 03/22/16 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 01:29	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 01:29	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 01:29	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 01:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 01:29	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 01:29	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 01:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 01:29	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 01:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 01:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 01:29	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 01:29	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 01:29	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 01:29	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 01:29	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 01:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 01:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 01:29	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 01:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 01:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 01:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 01:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 01:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/16 01:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 01:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/16 01:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 01:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 01:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 01:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 01:29	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 01:29	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 01:29	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 01:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 01:29	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 01:29	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 01:29	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 01:29	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 01:29	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 01:29	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 01:29	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 01:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 01:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 01:29	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 01:29	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 01:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 01:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 01:29	79-34-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: TRIP BLANKS		Lab ID: 92290859012	Collected: 03/21/16 00:00	Received: 03/22/16 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 01:29	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/16 01:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 01:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 01:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/16 01:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 01:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/25/16 01:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 01:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 01:29	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 01:29	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 01:29	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 01:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 01:29	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		03/25/16 01:29	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%	70-130	1		03/25/16 01:29	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		03/25/16 01:29	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		03/25/16 01:29	2037-26-5	
8260 MSV SIM		Analytical Method: EPA 8260B Mod.						
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		03/24/16 11:56	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	50-150	1		03/24/16 11:56	17060-07-0	
Toluene-d8 (S)	102	%	50-150	1		03/24/16 11:56	2037-26-5	

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: EB-032116		Lab ID: 92290859013	Collected: 03/21/16 16:15	Received: 03/22/16 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	25.0	1		03/25/16 02:02	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/16 02:02	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/25/16 02:02	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/25/16 02:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/16 02:02	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/16 02:02	75-25-2	
Bromomethane	ND	ug/L	2.0	1		03/25/16 02:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		03/25/16 02:02	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/16 02:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/16 02:02	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/16 02:02	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/16 02:02	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/16 02:02	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 02:02	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/25/16 02:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		03/25/16 02:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/16 02:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/25/16 02:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/25/16 02:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:02	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/25/16 02:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/16 02:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/16 02:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/16 02:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/25/16 02:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/16 02:02	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		03/25/16 02:02	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	150	1		03/25/16 02:02	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		03/25/16 02:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/25/16 02:02	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		03/25/16 02:02	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/25/16 02:02	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		03/25/16 02:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		03/25/16 02:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/16 02:02	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		03/25/16 02:02	91-20-3	
Styrene	ND	ug/L	1.0	1		03/25/16 02:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 02:02	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/16 02:02	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Sample: EB-032116		Lab ID: 92290859013		Collected: 03/21/16 16:15		Received: 03/22/16 09:40		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 8260							
Tetrachloroethene	ND	ug/L	1.0	1		03/25/16 02:02	127-18-4		
Toluene	ND	ug/L	1.0	1		03/25/16 02:02	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:02	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/16 02:02	120-82-1		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/16 02:02	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/16 02:02	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		03/25/16 02:02	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		03/25/16 02:02	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		03/25/16 02:02	96-18-4		
Vinyl acetate	ND	ug/L	2.0	1		03/25/16 02:02	108-05-4		
Vinyl chloride	ND	ug/L	1.0	1		03/25/16 02:02	75-01-4		
Xylene (Total)	ND	ug/L	2.0	1		03/25/16 02:02	1330-20-7		
m&p-Xylene	ND	ug/L	2.0	1		03/25/16 02:02	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		03/25/16 02:02	95-47-6		
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130	1		03/25/16 02:02	460-00-4		
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		03/25/16 02:02	17060-07-0		
Toluene-d8 (S)	96	%	70-130	1		03/25/16 02:02	2037-26-5		
8260 MSV SIM		Analytical Method: EPA 8260B Mod.							
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1		03/22/16 23:59	123-91-1		
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%	50-150	1		03/22/16 23:59	17060-07-0		
Toluene-d8 (S)	101	%	50-150	1		03/22/16 23:59	2037-26-5		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

QC Batch: MSV/36119 Analysis Method: EPA 8260
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
 Associated Lab Samples: 92290859001, 92290859002, 92290859003, 92290859004, 92290859005, 92290859007, 92290859008, 92290859009, 92290859012, 92290859013

METHOD BLANK: 1694724 Matrix: Water
 Associated Lab Samples: 92290859001, 92290859002, 92290859003, 92290859004, 92290859005, 92290859007, 92290859008, 92290859009, 92290859012, 92290859013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	03/25/16 00:56	
1,1,1-Trichloroethane	ug/L	ND	1.0	03/25/16 00:56	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/25/16 00:56	
1,1,2-Trichloroethane	ug/L	ND	1.0	03/25/16 00:56	
1,1-Dichloroethane	ug/L	ND	1.0	03/25/16 00:56	
1,1-Dichloroethene	ug/L	ND	1.0	03/25/16 00:56	
1,1-Dichloropropene	ug/L	ND	1.0	03/25/16 00:56	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	03/25/16 00:56	
1,2,3-Trichloropropane	ug/L	ND	1.0	03/25/16 00:56	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	03/25/16 00:56	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	03/25/16 00:56	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/25/16 00:56	
1,2-Dichlorobenzene	ug/L	ND	1.0	03/25/16 00:56	
1,2-Dichloroethane	ug/L	ND	1.0	03/25/16 00:56	
1,2-Dichloropropane	ug/L	ND	1.0	03/25/16 00:56	
1,3-Dichlorobenzene	ug/L	ND	1.0	03/25/16 00:56	
1,3-Dichloropropane	ug/L	ND	1.0	03/25/16 00:56	
1,4-Dichlorobenzene	ug/L	ND	1.0	03/25/16 00:56	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	03/25/16 00:56	
2,2-Dichloropropane	ug/L	ND	1.0	03/25/16 00:56	
2-Butanone (MEK)	ug/L	ND	5.0	03/25/16 00:56	
2-Chlorotoluene	ug/L	ND	1.0	03/25/16 00:56	
2-Hexanone	ug/L	ND	5.0	03/25/16 00:56	
4-Chlorotoluene	ug/L	ND	1.0	03/25/16 00:56	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	03/25/16 00:56	
Acetone	ug/L	ND	25.0	03/25/16 00:56	
Benzene	ug/L	ND	1.0	03/25/16 00:56	
Bromobenzene	ug/L	ND	1.0	03/25/16 00:56	
Bromochloromethane	ug/L	ND	1.0	03/25/16 00:56	
Bromodichloromethane	ug/L	ND	1.0	03/25/16 00:56	
Bromoform	ug/L	ND	1.0	03/25/16 00:56	
Bromomethane	ug/L	ND	2.0	03/25/16 00:56	
Carbon tetrachloride	ug/L	ND	1.0	03/25/16 00:56	
Chlorobenzene	ug/L	ND	1.0	03/25/16 00:56	
Chloroethane	ug/L	ND	1.0	03/25/16 00:56	
Chloroform	ug/L	ND	1.0	03/25/16 00:56	
Chloromethane	ug/L	ND	1.0	03/25/16 00:56	
cis-1,2-Dichloroethene	ug/L	ND	1.0	03/25/16 00:56	
cis-1,3-Dichloropropene	ug/L	ND	1.0	03/25/16 00:56	
Dibromochloromethane	ug/L	ND	1.0	03/25/16 00:56	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

METHOD BLANK: 1694724

Matrix: Water

Associated Lab Samples: 92290859001, 92290859002, 92290859003, 92290859004, 92290859005, 92290859007, 92290859008, 92290859009, 92290859012, 92290859013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	1.0	03/25/16 00:56	
Dichlorodifluoromethane	ug/L	ND	1.0	03/25/16 00:56	
Diisopropyl ether	ug/L	ND	1.0	03/25/16 00:56	
Ethylbenzene	ug/L	ND	1.0	03/25/16 00:56	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	03/25/16 00:56	
m&p-Xylene	ug/L	ND	2.0	03/25/16 00:56	
Methyl-tert-butyl ether	ug/L	ND	1.0	03/25/16 00:56	
Methylene Chloride	ug/L	ND	2.0	03/25/16 00:56	
Naphthalene	ug/L	ND	1.0	03/25/16 00:56	
o-Xylene	ug/L	ND	1.0	03/25/16 00:56	
p-Isopropyltoluene	ug/L	ND	1.0	03/25/16 00:56	
Styrene	ug/L	ND	1.0	03/25/16 00:56	
Tetrachloroethene	ug/L	ND	1.0	03/25/16 00:56	
Toluene	ug/L	ND	1.0	03/25/16 00:56	
trans-1,2-Dichloroethene	ug/L	ND	1.0	03/25/16 00:56	
trans-1,3-Dichloropropene	ug/L	ND	1.0	03/25/16 00:56	
Trichloroethene	ug/L	ND	1.0	03/25/16 00:56	
Trichlorofluoromethane	ug/L	ND	1.0	03/25/16 00:56	
Vinyl acetate	ug/L	ND	2.0	03/25/16 00:56	
Vinyl chloride	ug/L	ND	1.0	03/25/16 00:56	
Xylene (Total)	ug/L	ND	2.0	03/25/16 00:56	
1,2-Dichloroethane-d4 (S)	%	100	70-130	03/25/16 00:56	
4-Bromofluorobenzene (S)	%	106	70-130	03/25/16 00:56	
Toluene-d8 (S)	%	106	70-130	03/25/16 00:56	

LABORATORY CONTROL SAMPLE: 1694725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.4	105	70-130	
1,1,1-Trichloroethane	ug/L	50	52.0	104	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	46.6	93	70-130	
1,1,2-Trichloroethane	ug/L	50	51.5	103	70-130	
1,1-Dichloroethane	ug/L	50	52.3	105	70-130	
1,1-Dichloroethene	ug/L	50	46.4	93	70-132	
1,1-Dichloropropene	ug/L	50	54.1	108	70-130	
1,2,3-Trichlorobenzene	ug/L	50	49.4	99	70-135	
1,2,3-Trichloropropane	ug/L	50	45.4	91	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.3	99	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	47.6	95	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	61.0	122	70-130	
1,2-Dichlorobenzene	ug/L	50	49.9	100	70-130	
1,2-Dichloroethane	ug/L	50	49.8	100	70-130	
1,2-Dichloropropane	ug/L	50	48.6	97	70-130	

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

LABORATORY CONTROL SAMPLE: 1694725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	53.3	107	70-130	
1,3-Dichloropropane	ug/L	50	58.1	116	70-130	
1,4-Dichlorobenzene	ug/L	50	51.4	103	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	1150	115	71-125	
2,2-Dichloropropane	ug/L	50	50.6	101	58-145	
2-Butanone (MEK)	ug/L	100	89.6	90	70-145	
2-Chlorotoluene	ug/L	50	45.8	92	70-130	
2-Hexanone	ug/L	100	98.2	98	70-144	
4-Chlorotoluene	ug/L	50	52.3	105	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.0	98	70-140	
Acetone	ug/L	100	91.8	92	50-175	
Benzene	ug/L	50	44.7	89	70-130	
Bromobenzene	ug/L	50	52.0	104	70-130	
Bromochloromethane	ug/L	50	53.1	106	70-130	
Bromodichloromethane	ug/L	50	51.3	103	70-130	
Bromoform	ug/L	50	43.9	88	70-130	
Bromomethane	ug/L	50	44.6	89	54-130	
Carbon tetrachloride	ug/L	50	47.6	95	70-132	
Chlorobenzene	ug/L	50	51.2	102	70-130	
Chloroethane	ug/L	50	50.5	101	64-134	
Chloroform	ug/L	50	50.0	100	70-130	
Chloromethane	ug/L	50	48.5	97	64-130	
cis-1,2-Dichloroethene	ug/L	50	51.0	102	70-131	
cis-1,3-Dichloropropene	ug/L	50	49.8	100	70-130	
Dibromochloromethane	ug/L	50	59.6	119	70-130	
Dibromomethane	ug/L	50	49.0	98	70-131	
Dichlorodifluoromethane	ug/L	50	43.2	86	56-130	
Diisopropyl ether	ug/L	50	52.2	104	70-130	
Ethylbenzene	ug/L	50	50.2	100	70-130	
Hexachloro-1,3-butadiene	ug/L	50	47.4	95	70-130	
m&p-Xylene	ug/L	100	99.3	99	70-130	
Methyl-tert-butyl ether	ug/L	50	51.9	104	70-130	
Methylene Chloride	ug/L	50	49.9	100	63-130	
Naphthalene	ug/L	50	46.2	92	70-138	
o-Xylene	ug/L	50	44.5	89	70-130	
p-Isopropyltoluene	ug/L	50	51.1	102	70-130	
Styrene	ug/L	50	46.9	94	70-130	
Tetrachloroethene	ug/L	50	56.3	113	70-130	
Toluene	ug/L	50	48.2	96	70-130	
trans-1,2-Dichloroethene	ug/L	50	52.3	105	70-130	
trans-1,3-Dichloropropene	ug/L	50	50.4	101	70-132	
Trichloroethene	ug/L	50	47.8	96	70-130	
Trichlorofluoromethane	ug/L	50	44.2	88	62-133	
Vinyl acetate	ug/L	100	113	113	66-157	
Vinyl chloride	ug/L	50	46.5	93	50-150	
Xylene (Total)	ug/L	150	144	96	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

LABORATORY CONTROL SAMPLE: 1694725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			110	70-130	
Toluene-d8 (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1694726 1694727

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92290859004 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	22.8	17.2	114	86	70-130	28	30	
1,1,1-Trichloroethane	ug/L	25.7	20	20	51.8	43.8	130	90	70-130	17	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	21.7	18.4	109	92	70-130	17	30	
1,1,2-Trichloroethane	ug/L	ND	20	20	20.1	16.6	98	81	70-130	19	30	
1,1-Dichloroethane	ug/L	39.6	20	20	62.9	53.9	116	71	70-130	15	30	
1,1-Dichloroethene	ug/L	138	20	20	202	157	318	94	70-166	25	30	E,M1
1,1-Dichloropropene	ug/L	ND	20	20	25.5	20.0	127	100	70-130	24	30	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	19.5	15.6	98	78	70-130	22	30	
1,2,3-Trichloropropane	ug/L	ND	20	20	21.6	18.5	108	92	70-130	16	30	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.9	15.7	104	78	70-130	29	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	19.3	17.2	97	86	70-130	12	30	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.8	16.7	109	83	70-130	26	30	
1,2-Dichlorobenzene	ug/L	ND	20	20	21.6	17.5	108	87	70-130	21	30	
1,2-Dichloroethane	ug/L	1.9	20	20	23.5	19.1	108	86	70-130	21	30	
1,2-Dichloropropane	ug/L	ND	20	20	23.0	15.5	115	78	70-130	39	30	R1
1,3-Dichlorobenzene	ug/L	ND	20	20	23.1	18.0	116	90	70-130	25	30	
1,3-Dichloropropane	ug/L	ND	20	20	21.8	16.2	109	81	70-130	29	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	22.5	17.1	113	85	70-130	27	30	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	271	572	68	143	70-130	72	30	M1,R1
2,2-Dichloropropane	ug/L	ND	20	20	21.6	16.3	108	81	70-130	28	30	
2-Butanone (MEK)	ug/L	ND	40	40	38.2	34.0	95	85	70-130	12	30	
2-Chlorotoluene	ug/L	ND	20	20	22.5	16.7	113	83	70-130	30	30	
2-Hexanone	ug/L	ND	40	40	38.8	34.6	97	87	70-130	11	30	
4-Chlorotoluene	ug/L	ND	20	20	23.1	17.4	115	87	70-130	28	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	35.9	33.0	90	82	70-130	9	30	
Acetone	ug/L	ND	40	40	42.1	32.0	105	80	70-130	27	30	
Benzene	ug/L	4.4	20	20	25.2	21.1	104	84	70-148	18	30	
Bromobenzene	ug/L	ND	20	20	23.2	18.9	116	94	70-130	21	30	
Bromochloromethane	ug/L	ND	20	20	23.6	18.3	118	91	70-130	25	30	
Bromodichloromethane	ug/L	ND	20	20	22.7	15.9	113	80	70-130	35	30	R1
Bromoform	ug/L	ND	20	20	19.3	15.9	97	79	70-130	20	30	
Bromomethane	ug/L	ND	20	20	20.5	13.6	102	68	70-130	41	30	M1,R1
Carbon tetrachloride	ug/L	ND	20	20	25.1	18.5	126	92	70-130	31	30	R1
Chlorobenzene	ug/L	ND	20	20	23.1	17.4	116	87	70-146	28	30	
Chloroethane	ug/L	ND	20	20	25.7	15.3	129	77	70-130	51	30	R1
Chloroform	ug/L	ND	20	20	25.0	20.0	125	100	70-130	22	30	
Chloromethane	ug/L	ND	20	20	21.3	13.7	107	69	70-130	43	30	M1,R1

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Parameter	Units	92290859004		1694726		1694727		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
cis-1,2-Dichloroethene	ug/L	ND	20	20	25.0	20.3	125	101	70-130	21	30		
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.1	16.8	100	84	70-130	18	30		
Dibromochloromethane	ug/L	ND	20	20	22.3	17.3	111	86	70-130	25	30		
Dibromomethane	ug/L	ND	20	20	22.9	16.0	114	80	70-130	36	30	R1	
Dichlorodifluoromethane	ug/L	ND	20	20	19.4	13.0	97	65	70-130	40	30	M1,R1	
Diisopropyl ether	ug/L	ND	20	20	25.7	16.7	128	84	70-130	42	30	R1	
Ethylbenzene	ug/L	ND	20	20	22.6	17.7	113	88	70-130	24	30		
Hexachloro-1,3-butadiene	ug/L	ND	20	20	20.2	17.0	101	85	70-130	17	30		
m&p-Xylene	ug/L	ND	40	40	44.5	33.8	111	84	70-130	27	30		
Methyl-tert-butyl ether	ug/L	ND	20	20	24.5	16.5	120	81	70-130	39	30	R1	
Methylene Chloride	ug/L	ND	20	20	24.3	16.6	118	79	70-130	38	30	R1	
Naphthalene	ug/L	ND	20	20	19.8	14.1	99	70	70-130	34	30	R1	
o-Xylene	ug/L	ND	20	20	21.5	17.3	108	87	70-130	21	30		
p-Isopropyltoluene	ug/L	ND	20	20	22.5	17.9	113	89	70-130	23	30		
Styrene	ug/L	ND	20	20	20.9	17.0	105	85	70-130	21	30		
Tetrachloroethene	ug/L	ND	20	20	22.4	17.4	110	85	70-130	25	30		
Toluene	ug/L	ND	20	20	21.0	15.9	105	79	70-155	28	30		
trans-1,2-Dichloroethene	ug/L	ND	20	20	26.8	18.8	134	94	70-130	35	30	M1,R1	
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.8	15.6	94	78	70-130	19	30		
Trichloroethene	ug/L	ND	20	20	23.9	17.7	116	85	69-151	30	30		
Trichlorofluoromethane	ug/L	ND	20	20	22.5	16.0	112	80	70-130	34	30	R1	
Vinyl acetate	ug/L	ND	40	40	42.1	32.3	105	81	70-130	26	30		
Vinyl chloride	ug/L	ND	20	20	21.9	15.8	110	79	70-130	33	30	R1	
1,2-Dichloroethane-d4 (S)	%						100	101	70-130				
4-Bromofluorobenzene (S)	%						105	97	70-130				
Toluene-d8 (S)	%						87	88	70-130				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

QC Batch:	MSV/36171	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	92290859006, 92290859010, 92290859011		

METHOD BLANK: 1696480 Matrix: Water

Associated Lab Samples: 92290859006, 92290859010, 92290859011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	03/28/16 14:41	
1,1,1-Trichloroethane	ug/L	ND	1.0	03/28/16 14:41	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/28/16 14:41	
1,1,2-Trichloroethane	ug/L	ND	1.0	03/28/16 14:41	
1,1-Dichloroethane	ug/L	ND	1.0	03/28/16 14:41	
1,1-Dichloroethene	ug/L	ND	1.0	03/28/16 14:41	
1,1-Dichloropropene	ug/L	ND	1.0	03/28/16 14:41	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	03/28/16 14:41	
1,2,3-Trichloropropane	ug/L	ND	1.0	03/28/16 14:41	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	03/28/16 14:41	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	03/28/16 14:41	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/28/16 14:41	
1,2-Dichlorobenzene	ug/L	ND	1.0	03/28/16 14:41	
1,2-Dichloroethane	ug/L	ND	1.0	03/28/16 14:41	
1,2-Dichloropropane	ug/L	ND	1.0	03/28/16 14:41	
1,3-Dichlorobenzene	ug/L	ND	1.0	03/28/16 14:41	
1,3-Dichloropropane	ug/L	ND	1.0	03/28/16 14:41	
1,4-Dichlorobenzene	ug/L	ND	1.0	03/28/16 14:41	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	03/28/16 14:41	
2,2-Dichloropropane	ug/L	ND	1.0	03/28/16 14:41	
2-Butanone (MEK)	ug/L	ND	5.0	03/28/16 14:41	
2-Chlorotoluene	ug/L	ND	1.0	03/28/16 14:41	
2-Hexanone	ug/L	ND	5.0	03/28/16 14:41	
4-Chlorotoluene	ug/L	ND	1.0	03/28/16 14:41	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	03/28/16 14:41	
Acetone	ug/L	ND	25.0	03/28/16 14:41	
Benzene	ug/L	ND	1.0	03/28/16 14:41	
Bromobenzene	ug/L	ND	1.0	03/28/16 14:41	
Bromochloromethane	ug/L	ND	1.0	03/28/16 14:41	
Bromodichloromethane	ug/L	ND	1.0	03/28/16 14:41	
Bromoform	ug/L	ND	1.0	03/28/16 14:41	
Bromomethane	ug/L	ND	2.0	03/28/16 14:41	
Carbon tetrachloride	ug/L	ND	1.0	03/28/16 14:41	
Chlorobenzene	ug/L	ND	1.0	03/28/16 14:41	
Chloroethane	ug/L	ND	1.0	03/28/16 14:41	
Chloroform	ug/L	ND	1.0	03/28/16 14:41	
Chloromethane	ug/L	ND	1.0	03/28/16 14:41	
cis-1,2-Dichloroethene	ug/L	ND	1.0	03/28/16 14:41	
cis-1,3-Dichloropropene	ug/L	ND	1.0	03/28/16 14:41	
Dibromochloromethane	ug/L	ND	1.0	03/28/16 14:41	
Dibromomethane	ug/L	ND	1.0	03/28/16 14:41	

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

METHOD BLANK: 1696480

Matrix: Water

Associated Lab Samples: 92290859006, 92290859010, 92290859011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	03/28/16 14:41	
Diisopropyl ether	ug/L	ND	1.0	03/28/16 14:41	
Ethylbenzene	ug/L	ND	1.0	03/28/16 14:41	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	03/28/16 14:41	
m&p-Xylene	ug/L	ND	2.0	03/28/16 14:41	
Methyl-tert-butyl ether	ug/L	ND	1.0	03/28/16 14:41	
Methylene Chloride	ug/L	ND	2.0	03/28/16 14:41	
Naphthalene	ug/L	ND	1.0	03/28/16 14:41	
o-Xylene	ug/L	ND	1.0	03/28/16 14:41	
p-Isopropyltoluene	ug/L	ND	1.0	03/28/16 14:41	
Styrene	ug/L	ND	1.0	03/28/16 14:41	
Tetrachloroethene	ug/L	ND	1.0	03/28/16 14:41	
Toluene	ug/L	ND	1.0	03/28/16 14:41	
trans-1,2-Dichloroethene	ug/L	ND	1.0	03/28/16 14:41	
trans-1,3-Dichloropropene	ug/L	ND	1.0	03/28/16 14:41	
Trichloroethene	ug/L	ND	1.0	03/28/16 14:41	
Trichlorofluoromethane	ug/L	ND	1.0	03/28/16 14:41	
Vinyl acetate	ug/L	ND	2.0	03/28/16 14:41	
Vinyl chloride	ug/L	ND	1.0	03/28/16 14:41	
Xylene (Total)	ug/L	ND	2.0	03/28/16 14:41	
1,2-Dichloroethane-d4 (S)	%	98	70-130	03/28/16 14:41	
4-Bromofluorobenzene (S)	%	96	70-130	03/28/16 14:41	
Toluene-d8 (S)	%	100	70-130	03/28/16 14:41	

LABORATORY CONTROL SAMPLE: 1696481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.2	98	70-130	
1,1,1-Trichloroethane	ug/L	50	47.3	95	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.5	95	70-130	
1,1,2-Trichloroethane	ug/L	50	47.9	96	70-130	
1,1-Dichloroethane	ug/L	50	47.8	96	70-130	
1,1-Dichloroethene	ug/L	50	48.7	97	70-132	
1,1-Dichloropropene	ug/L	50	49.3	99	70-130	
1,2,3-Trichlorobenzene	ug/L	50	52.3	105	70-135	
1,2,3-Trichloropropane	ug/L	50	49.2	98	70-130	
1,2,4-Trichlorobenzene	ug/L	50	52.0	104	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	49.3	99	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.1	100	70-130	
1,2-Dichlorobenzene	ug/L	50	46.9	94	70-130	
1,2-Dichloroethane	ug/L	50	44.5	89	70-130	
1,2-Dichloropropane	ug/L	50	48.7	97	70-130	
1,3-Dichlorobenzene	ug/L	50	49.2	98	70-130	
1,3-Dichloropropane	ug/L	50	46.8	94	70-130	

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

LABORATORY CONTROL SAMPLE: 1696481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	49.1	98	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	466	47	71-125	L0
2,2-Dichloropropane	ug/L	50	50.2	100	58-145	
2-Butanone (MEK)	ug/L	100	94.8	95	70-145	
2-Chlorotoluene	ug/L	50	48.2	96	70-130	
2-Hexanone	ug/L	100	93.5	93	70-144	
4-Chlorotoluene	ug/L	50	47.5	95	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	70-140	
Acetone	ug/L	100	92.9	93	50-175	
Benzene	ug/L	50	49.3	99	70-130	
Bromobenzene	ug/L	50	47.5	95	70-130	
Bromochloromethane	ug/L	50	47.8	96	70-130	
Bromodichloromethane	ug/L	50	48.4	97	70-130	
Bromoform	ug/L	50	39.0	78	70-130	
Bromomethane	ug/L	50	54.5	109	54-130	
Carbon tetrachloride	ug/L	50	48.5	97	70-132	
Chlorobenzene	ug/L	50	46.9	94	70-130	
Chloroethane	ug/L	50	46.5	93	64-134	
Chloroform	ug/L	50	48.9	98	70-130	
Chloromethane	ug/L	50	46.0	92	64-130	
cis-1,2-Dichloroethene	ug/L	50	48.6	97	70-131	
cis-1,3-Dichloropropene	ug/L	50	51.3	103	70-130	
Dibromochloromethane	ug/L	50	47.4	95	70-130	
Dibromomethane	ug/L	50	49.3	99	70-131	
Dichlorodifluoromethane	ug/L	50	50.0	100	56-130	
Diisopropyl ether	ug/L	50	50.3	101	70-130	
Ethylbenzene	ug/L	50	47.3	95	70-130	
Hexachloro-1,3-butadiene	ug/L	50	51.1	102	70-130	
m&p-Xylene	ug/L	100	93.1	93	70-130	
Methyl-tert-butyl ether	ug/L	50	49.3	99	70-130	
Methylene Chloride	ug/L	50	48.7	97	63-130	
Naphthalene	ug/L	50	51.3	103	70-138	
o-Xylene	ug/L	50	46.1	92	70-130	
p-Isopropyltoluene	ug/L	50	50.0	100	70-130	
Styrene	ug/L	50	47.4	95	70-130	
Tetrachloroethene	ug/L	50	47.7	95	70-130	
Toluene	ug/L	50	47.0	94	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.9	100	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.6	99	70-132	
Trichloroethene	ug/L	50	46.6	93	70-130	
Trichlorofluoromethane	ug/L	50	51.2	102	62-133	
Vinyl acetate	ug/L	100	90.4	90	66-157	
Vinyl chloride	ug/L	50	53.2	106	50-150	
Xylene (Total)	ug/L	150	139	93	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		1696482		1696483									
Parameter	Units	92291503007	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits				
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	21.9	20.1	109	101	70-130	8	30		
1,1,1-Trichloroethane	ug/L	ND	20	20	22.9	20.5	114	103	70-130	11	30		
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.6	20.8	103	104	70-130	1	30		
1,1,2-Trichloroethane	ug/L	ND	20	20	21.9	20.8	109	104	70-130	5	30		
1,1-Dichloroethane	ug/L	ND	20	20	22.5	21.0	113	105	70-130	7	30		
1,1-Dichloroethene	ug/L	ND	20	20	23.9	22.5	119	112	70-166	6	30		
1,1-Dichloropropene	ug/L	ND	20	20	23.8	22.2	119	111	70-130	7	30		
1,2,3-Trichlorobenzene	ug/L	ND	20	20	22.6	21.6	113	108	70-130	4	30		
1,2,3-Trichloropropane	ug/L	ND	20	20	20.3	19.9	102	100	70-130	2	30		
1,2,4-Trichlorobenzene	ug/L	ND	20	20	22.2	21.8	111	109	70-130	2	30		
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	19.3	19.7	97	98	70-130	2	30		
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	22.5	21.2	113	106	70-130	6	30		
1,2-Dichlorobenzene	ug/L	ND	20	20	21.5	19.9	107	100	70-130	7	30		
1,2-Dichloroethane	ug/L	ND	20	20	20.4	19.6	101	97	70-130	4	30		
1,2-Dichloropropane	ug/L	ND	20	20	23.0	21.1	115	106	70-130	9	30		
1,3-Dichlorobenzene	ug/L	ND	20	20	22.8	21.5	114	108	70-130	6	30		
1,3-Dichloropropane	ug/L	ND	20	20	21.4	19.9	107	100	70-130	7	30		
1,4-Dichlorobenzene	ug/L	ND	20	20	21.8	21.4	109	107	70-130	2	30		
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	400	ND	123J	10	31	70-130		30	MO	
2,2-Dichloropropane	ug/L	ND	20	20	21.5	20.0	108	100	70-130	7	30		
2-Butanone (MEK)	ug/L	ND	40	40	36.1	41.2	90	103	70-130	13	30		
2-Chlorotoluene	ug/L	ND	20	20	22.8	21.0	114	105	70-130	8	30		
2-Hexanone	ug/L	ND	40	40	36.9	41.3	92	103	70-130	11	30		
4-Chlorotoluene	ug/L	ND	20	20	21.7	20.4	109	102	70-130	6	30		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	41.7	45.4	104	113	70-130	9	30		
Acetone	ug/L	ND	40	40	50.4	57.7	80	99	70-130	14	30		
Benzene	ug/L	ND	20	20	23.5	21.7	117	109	70-148	8	30		
Bromobenzene	ug/L	ND	20	20	22.3	20.5	111	103	70-130	8	30		
Bromochloromethane	ug/L	ND	20	20	21.8	20.8	109	104	70-130	5	30		
Bromodichloromethane	ug/L	ND	20	20	21.5	20.7	108	103	70-130	4	30		
Bromoform	ug/L	ND	20	20	17.9	17.4	89	87	70-130	3	30		
Bromomethane	ug/L	ND	20	20	23.7	25.6	119	128	70-130	8	30		
Carbon tetrachloride	ug/L	ND	20	20	23.3	21.8	116	109	70-130	7	30		
Chlorobenzene	ug/L	ND	20	20	22.3	20.2	112	101	70-146	10	30		
Chloroethane	ug/L	ND	20	20	22.1	21.2	110	106	70-130	4	30		
Chloroform	ug/L	ND	20	20	22.8	22.0	114	110	70-130	3	30		
Chloromethane	ug/L	ND	20	20	21.6	19.4	108	97	70-130	10	30		
cis-1,2-Dichloroethene	ug/L	ND	20	20	24.1	21.9	116	105	70-130	10	30		
cis-1,3-Dichloropropene	ug/L	ND	20	20	21.9	20.0	109	100	70-130	9	30		
Dibromochloromethane	ug/L	ND	20	20	20.6	18.4	103	92	70-130	12	30		
Dibromomethane	ug/L	ND	20	20	22.0	20.7	110	103	70-130	6	30		
Dichlorodifluoromethane	ug/L	ND	20	20	21.0	19.7	105	99	70-130	6	30		
Diisopropyl ether	ug/L	ND	20	20	22.8	21.3	114	106	70-130	7	30		
Ethylbenzene	ug/L	ND	20	20	22.5	20.5	113	103	70-130	9	30		

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1696482		1696483		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92291503007 Result	MS Spike Conc.	MSD Spike Conc.									
Hexachloro-1,3-butadiene	ug/L	ND	20	20	21.1	21.3	106	106	70-130	1	30		
m&p-Xylene	ug/L	ND	40	40	43.6	40.3	109	101	70-130	8	30		
Methyl-tert-butyl ether	ug/L	1.5	20	20	23.2	22.7	109	106	70-130	2	30		
Methylene Chloride	ug/L	ND	20	20	22.4	20.6	112	103	70-130	9	30		
Naphthalene	ug/L	ND	20	20	20.6	20.8	103	104	70-130	1	30		
o-Xylene	ug/L	ND	20	20	21.4	19.8	107	99	70-130	7	30		
p-Isopropyltoluene	ug/L	ND	20	20	22.8	21.1	114	105	70-130	8	30		
Styrene	ug/L	ND	20	20	21.6	19.8	108	99	70-130	9	30		
Tetrachloroethene	ug/L	41.4	20	20	68.5	64.9	136	117	70-130	5	30	M1	
Toluene	ug/L	ND	20	20	22.5	20.8	112	104	70-155	8	30		
trans-1,2-Dichloroethene	ug/L	ND	20	20	23.5	22.5	117	112	70-130	5	30		
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.9	19.4	105	97	70-130	7	30		
Trichloroethene	ug/L	ND	20	20	22.9	21.7	112	106	69-151	5	30		
Trichlorofluoromethane	ug/L	ND	20	20	24.5	23.1	122	115	70-130	6	30		
Vinyl acetate	ug/L	ND	40	40	35.9	34.8	90	87	70-130	3	30		
Vinyl chloride	ug/L	ND	20	20	24.8	23.7	124	119	70-130	4	30		
1,2-Dichloroethane-d4 (S)	%							93	98	70-130			
4-Bromofluorobenzene (S)	%							96	97	70-130			
Toluene-d8 (S)	%							98	99	70-130			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

QC Batch: MSV/36091 Analysis Method: EPA 8260B Mod.
QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM
Associated Lab Samples: 92290859001, 92290859002, 92290859003, 92290859004, 92290859005, 92290859006, 92290859007, 92290859008, 92290859009, 92290859010, 92290859013

METHOD BLANK: 1692348 Matrix: Water
Associated Lab Samples: 92290859001, 92290859002, 92290859003, 92290859004, 92290859005, 92290859006, 92290859007, 92290859008, 92290859009, 92290859010, 92290859013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	03/22/16 17:50	
1,2-Dichloroethane-d4 (S)	%	101	50-150	03/22/16 17:50	
Toluene-d8 (S)	%	103	50-150	03/22/16 17:50	

LABORATORY CONTROL SAMPLE: 1692349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	18.4	92	71-125	
1,2-Dichloroethane-d4 (S)	%			101	50-150	
Toluene-d8 (S)	%			102	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1692350 1692351

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92290859004 Result	Spike Conc.	Spike Conc.	MS Result						
1,4-Dioxane (p-Dioxane)	ug/L	131	50	50	173	175	85	88	50-150	1	30
1,2-Dichloroethane-d4 (S)	%						101	101	50-150		150
Toluene-d8 (S)	%						103	102	50-150		150

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

QC Batch: MSV/36104 Analysis Method: EPA 8260B Mod.

QC Batch Method: EPA 8260B Mod. Analysis Description: 8260 MSV SIM

Associated Lab Samples: 92290859011, 92290859012

METHOD BLANK: 1693815 Matrix: Water

Associated Lab Samples: 92290859011, 92290859012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	03/24/16 09:21	
1,2-Dichloroethane-d4 (S)	%	102	50-150	03/24/16 09:21	
Toluene-d8 (S)	%	103	50-150	03/24/16 09:21	

LABORATORY CONTROL SAMPLE: 1693816

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	18.2	91	71-125	
1,2-Dichloroethane-d4 (S)	%			100	50-150	
Toluene-d8 (S)	%			100	50-150	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: KOP-FLEX 3705-29
Pace Project No.: 92290859

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

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, Styrene, and Vinyl chloride.

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.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

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.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: KOP-FLEX 3705-29

Pace Project No.: 92290859

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92290859001	MW-100-HS	EPA 8260	MSV/36119		
92290859002	MW-18-56-HS	EPA 8260	MSV/36119		
92290859003	MW-03-25.5-HS	EPA 8260	MSV/36119		
92290859004	MW-23D-92-HS	EPA 8260	MSV/36119		
92290859005	MW-21D-102-HS	EPA 8260	MSV/36119		
92290859006	MW-1D-112-HS	EPA 8260	MSV/36171		
92290859007	MW-01-33-HS	EPA 8260	MSV/36119		
92290859008	MW-04-38-HS	EPA 8260	MSV/36119		
92290859009	MW-09-25-HS	EPA 8260	MSV/36119		
92290859010	MW-16-50-HS	EPA 8260	MSV/36171		
92290859011	MW-16D-100-HS	EPA 8260	MSV/36171		
92290859012	TRIP BLANKS	EPA 8260	MSV/36119		
92290859013	EB-032116	EPA 8260	MSV/36119		
92290859001	MW-100-HS	EPA 8260B Mod.	MSV/36091		
92290859002	MW-18-56-HS	EPA 8260B Mod.	MSV/36091		
92290859003	MW-03-25.5-HS	EPA 8260B Mod.	MSV/36091		
92290859004	MW-23D-92-HS	EPA 8260B Mod.	MSV/36091		
92290859005	MW-21D-102-HS	EPA 8260B Mod.	MSV/36091		
92290859006	MW-1D-112-HS	EPA 8260B Mod.	MSV/36091		
92290859007	MW-01-33-HS	EPA 8260B Mod.	MSV/36091		
92290859008	MW-04-38-HS	EPA 8260B Mod.	MSV/36091		
92290859009	MW-09-25-HS	EPA 8260B Mod.	MSV/36091		
92290859010	MW-16-50-HS	EPA 8260B Mod.	MSV/36091		
92290859011	MW-16D-100-HS	EPA 8260B Mod.	MSV/36104		
92290859012	TRIP BLANKS	EPA 8260B Mod.	MSV/36104		
92290859013	EB-032116	EPA 8260B Mod.	MSV/36091		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: WSP

Project #: WO# : 92290859

Courier: [X] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace [] Other: _____



92290859

Custody Seal Present? [X] Yes [] No Seals Intact? [X] Yes [] No

Date/Initials Person Examining Contents: RP 3/22/16

Packing Material: [] Bubble Wrap [X] Bubble Bags [] None [] Other: _____

Thermometer: [X] T1505 [] Type of Ice: [X] Wet [] Blue [] None [] Samples on ice, cooling process has begun

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 2.4°C Biological Tissue Frozen? [] Yes [X] No [] N/A

Temp should be above freezing to 6°C

USDA Regulated Soil ([] N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

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

[] Yes [X] No

			COMMENTS:
Chain of Custody Present?	[X] Yes [] No [] N/A	1.	
Chain of Custody Filled Out?	[X] Yes [] No [] N/A	2.	
Chain of Custody Relinquished?	[X] Yes [] No [] N/A	3.	
Sampler Name and/or Signature on COC?	[X] Yes [] No [] N/A	4.	
Samples Arrived within Hold Time?	[X] Yes [] No [] N/A	5.	
Short Hold Time Analysis (<72 hr.)?	[] Yes [X] No [] N/A	6.	
Rush Turn Around Time Requested?	[] Yes [X] No [] N/A	7.	
Sufficient Volume?	[X] Yes [] No [] N/A	8.	
Correct Containers Used?	[X] Yes [] No [] N/A	9.	
-Pace Containers Used?	[X] Yes [] No [] N/A		
Containers Intact?	[X] Yes [] No [] N/A	10.	
Filtered Volume Received for Dissolved Tests?	[] Yes [X] No [] N/A	11.	Note if sediment is visible in the dissolved container
Sample Labels Match COC?	[X] Yes [] No [] N/A	12.	
-Includes Date/Time/ID/Analysis Matrix: <u>Water</u>			
All containers needing acid/base preservation have been checked?	[] Yes [X] No [] N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	[] Yes [X] No [] N/A		
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	[] Yes [X] No [] N/A		
Samples checked for dechlorination	[] Yes [X] No [] N/A	14.	
Headspace in VOA Vials (>5-6mm)?	[] Yes [X] No [] N/A	15.	
Trip Blank Present?	[X] Yes [] No [] N/A	16.	
Trip Blank Custody Seals Present?	[X] Yes [] No [] N/A		
Pace Trip Blank Lot # (if purchased):			

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? [] Yes [] No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager SCURF Review: [Signature]

Date: 3/22/16

Project Manager SRF Review: [Signature]

Date: 3/23/16

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: WSP	Report To: Robert Wallace @ WSPgrp.com	Attention:	Company Name:	Address:	Reference:
Address: 3536 Dulles Technology Dr	Copy To:				
City: Reston, VA					
Email To: Robert Wallace @ WSPgrp.com	Purchase Order No.: 3705-29				
Phone: 703-704-6500	Project Name: Kop-Flex				
Fax:	Project Number:				
Requested Due Date/TAT: STD					
Requested Due Date/TAT: STD		Requested Analysis Filtered (Y/N)		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test ↓	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
					COMPOSITE START	COMPOSITE END/GRAB			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol			
1	MU-100-HS	DW WT WW	M	G	3/21/16	0745		5									001	
2	MU-18-56-HS	DW WT WW	M	G	3/21/16	0800		5									002	
3	MU-03-25.5-HS	DW WT WW	M	G	3/21/16	0830		5									003	
4	MU-23D-92-HS	DW WT WW	M	G	3/21/16	0900		5									004	
5	MS/MSP (of MU-23D-92-HS)	DW WT WW	M	G	3/21/16	0905		5									005	
6	MU-21D-102-HS	DW WT WW	M	G	3/21/16	1000		6									006	
7	MU-1D-112-HS	DW WT WW	M	G	3/21/16	1015		5									007	
8	MU-01-33-HS	DW WT WW	M	G	3/21/16	1035		6									008	
9	MU-04-38-HS	DW WT WW	M	G	3/21/16	1048		6									009	
10	MU-04-25-HS	DW WT WW	M	G	3/21/16	1202		6									010	
11	MU-16-50-HS	DW WT WW	M	G	3/21/16	1215		6									011	
12	MU-16D-100-HS	DW WT WW	M	G	3/21/16	1235		6									011	

ADDITIONAL COMMENTS	RETIQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		3/21/16	1635	RF Pace Hill	3/21/16	1644	Y Y Y

ORIGINAL

SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER: Robert Wallace, Laura Sarssekas	DATE Signed (MM/DD/YY): 3/21/16
SIGNATURE OF SAMPLER: <i>[Signature]</i>		DATE Signed (MM/DD/YY): 3/21/16	Temp in °C
SIGNATURE OF ANALYST: <i>[Signature]</i>		DATE Signed (MM/DD/YY): 3/21/16	Received on Ice (Y/N)
SIGNATURE OF RECEIVING PARTY: <i>[Signature]</i>		DATE Signed (MM/DD/YY): 3/21/16	Custody Sealed Cooler (Y/N)
SIGNATURE OF SHIPPER: <i>[Signature]</i>		DATE Signed (MM/DD/YY): 3/21/16	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.
F-ALL-Q-020rev.07, 15-May-2007

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: <u>WSP</u>	Report To: <u>Robert.Mallace@usfgrubpc.com</u>	Attention:	Company Name:	Address:	REGULATORY AGENCY
Address: <u>1330 Drillo Steh. Dr</u>	Copy To:				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
Site: <u>300, Herndon, VA</u>					<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <u>MPLE</u>
Email To: <u>Robert.Mallace@usfgrubpc.com</u>	Purchase Order No.: <u>3705-24</u>	Pace Quote Reference:	Pace Project Manager:	Pace Profile #:	Site Location STATE: <u>MD</u>
Phone: <u>(703) 704-550</u> Fax:	Project Name: <u>Keop Flex</u>				
Requested Due Date/AT: <u>STD</u>	Project Number:				

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test ↓	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			Drinking Water	Water	Waste Water			COMPOSITE START	COMPOSITE END/GRAB	Unpreserved	H ₂ SO ₄	HNO ₃	HCl			
1	TriP Blank K5						4									012
2	EB-032116						6		X							013
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

ADDITIONAL COMMENTS	REINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<i>[Signature]</i>	1630	3/21/16	<i>[Signature]</i>	3/21/16	9:40	Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rob Mallace & Larina Davis

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed (MM/DD/YY): 3/21/16

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

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

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

April 04, 2016

Eric Johnson
WSP Environmental Strategies
11190 Sunrise Valley Dr.
Suite #300
Reston, VA 20191

RE: Project: 3705/28 KOP FLEX HANOVER, MD
Pace Project No.: 92291412

Dear Eric Johnson:

Enclosed are the analytical results for sample(s) received by the laboratory on March 25, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,



Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Keith Green, WSP Environmental Strategies



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92291412001	MW-24D-HS	Water	03/22/16 13:15	03/25/16 09:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92291412001	MW-24D-HS	EPA 8260	NB	64	PASI-C
		EPA 8260B Mod.	DLK	3	PASI-C

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 3705/28 KOP FLEX HANOVER, MD
Pace Project No.: 92291412

Sample: MW-24D-HS	Lab ID: 92291412001	Collected: 03/22/16 13:15	Received: 03/25/16 09:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Acetone	ND	ug/L	312	12.5		03/28/16 08:34	67-64-1	
Benzene	ND	ug/L	12.5	12.5		03/28/16 08:34	71-43-2	
Bromobenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	108-86-1	
Bromochloromethane	ND	ug/L	12.5	12.5		03/28/16 08:34	74-97-5	
Bromodichloromethane	ND	ug/L	12.5	12.5		03/28/16 08:34	75-27-4	
Bromoform	ND	ug/L	12.5	12.5		03/28/16 08:34	75-25-2	
Bromomethane	ND	ug/L	25.0	12.5		03/28/16 08:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	62.5	12.5		03/28/16 08:34	78-93-3	
Carbon tetrachloride	ND	ug/L	12.5	12.5		03/28/16 08:34	56-23-5	
Chlorobenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	108-90-7	
Chloroethane	ND	ug/L	12.5	12.5		03/28/16 08:34	75-00-3	
Chloroform	ND	ug/L	12.5	12.5		03/28/16 08:34	67-66-3	
Chloromethane	ND	ug/L	12.5	12.5		03/28/16 08:34	74-87-3	
2-Chlorotoluene	ND	ug/L	12.5	12.5		03/28/16 08:34	95-49-8	
4-Chlorotoluene	ND	ug/L	12.5	12.5		03/28/16 08:34	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	25.0	12.5		03/28/16 08:34	96-12-8	
Dibromochloromethane	ND	ug/L	12.5	12.5		03/28/16 08:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	12.5	12.5		03/28/16 08:34	106-93-4	
Dibromomethane	ND	ug/L	12.5	12.5		03/28/16 08:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	106-46-7	
Dichlorodifluoromethane	ND	ug/L	12.5	12.5		03/28/16 08:34	75-71-8	
1,1-Dichloroethane	68.2	ug/L	12.5	12.5		03/28/16 08:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	12.5	12.5		03/28/16 08:34	107-06-2	
1,1-Dichloroethene	1280	ug/L	12.5	12.5		03/28/16 08:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	12.5	12.5		03/28/16 08:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	12.5	12.5		03/28/16 08:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	12.5	12.5		03/28/16 08:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	12.5	12.5		03/28/16 08:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	12.5	12.5		03/28/16 08:34	594-20-7	
1,1-Dichloropropene	ND	ug/L	12.5	12.5		03/28/16 08:34	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	12.5	12.5		03/28/16 08:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	12.5	12.5		03/28/16 08:34	10061-02-6	
Diisopropyl ether	ND	ug/L	12.5	12.5		03/28/16 08:34	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	1880	12.5		03/28/16 08:34	123-91-1	L2
Ethylbenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	12.5	12.5		03/28/16 08:34	87-68-3	
2-Hexanone	ND	ug/L	62.5	12.5		03/28/16 08:34	591-78-6	
p-Isopropyltoluene	ND	ug/L	12.5	12.5		03/28/16 08:34	99-87-6	
Methylene Chloride	ND	ug/L	25.0	12.5		03/28/16 08:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	62.5	12.5		03/28/16 08:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	12.5	12.5		03/28/16 08:34	1634-04-4	
Naphthalene	ND	ug/L	12.5	12.5		03/28/16 08:34	91-20-3	
Styrene	ND	ug/L	12.5	12.5		03/28/16 08:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	12.5	12.5		03/28/16 08:34	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	12.5	12.5		03/28/16 08:34	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

Sample: MW-24D-HS		Lab ID: 92291412001	Collected: 03/22/16 13:15	Received: 03/25/16 09:55	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 8260						
Tetrachloroethene	ND	ug/L	12.5	12.5		03/28/16 08:34	127-18-4	
Toluene	ND	ug/L	12.5	12.5		03/28/16 08:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	12.5	12.5		03/28/16 08:34	120-82-1	
1,1,1-Trichloroethane	28.0	ug/L	12.5	12.5		03/28/16 08:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	12.5	12.5		03/28/16 08:34	79-00-5	
Trichloroethene	ND	ug/L	12.5	12.5		03/28/16 08:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	12.5	12.5		03/28/16 08:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	12.5	12.5		03/28/16 08:34	96-18-4	
Vinyl acetate	ND	ug/L	25.0	12.5		03/28/16 08:34	108-05-4	
Vinyl chloride	ND	ug/L	12.5	12.5		03/28/16 08:34	75-01-4	
Xylene (Total)	ND	ug/L	25.0	12.5		03/28/16 08:34	1330-20-7	
m&p-Xylene	ND	ug/L	25.0	12.5		03/28/16 08:34	179601-23-1	
o-Xylene	ND	ug/L	12.5	12.5		03/28/16 08:34	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	96	%	70-130	12.5		03/28/16 08:34	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	12.5		03/28/16 08:34	17060-07-0	
Toluene-d8 (S)	99	%	70-130	12.5		03/28/16 08:34	2037-26-5	
8260 MSV SIM		Analytical Method: EPA 8260B Mod.						
1,4-Dioxane (p-Dioxane)	452	ug/L	10.0	5		04/02/16 20:35	123-91-1	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	50-150	5		04/02/16 20:35	17060-07-0	
Toluene-d8 (S)	101	%	50-150	5		04/02/16 20:35	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

QC Batch: MSV/36153

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV Low Level

Associated Lab Samples: 92291412001

METHOD BLANK: 1696034

Matrix: Water

Associated Lab Samples: 92291412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	03/28/16 03:02	
1,1,1-Trichloroethane	ug/L	ND	1.0	03/28/16 03:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/28/16 03:02	
1,1,2-Trichloroethane	ug/L	ND	1.0	03/28/16 03:02	
1,1-Dichloroethane	ug/L	ND	1.0	03/28/16 03:02	
1,1-Dichloroethene	ug/L	ND	1.0	03/28/16 03:02	
1,1-Dichloropropene	ug/L	ND	1.0	03/28/16 03:02	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	03/28/16 03:02	
1,2,3-Trichloropropane	ug/L	ND	1.0	03/28/16 03:02	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	03/28/16 03:02	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	03/28/16 03:02	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/28/16 03:02	
1,2-Dichlorobenzene	ug/L	ND	1.0	03/28/16 03:02	
1,2-Dichloroethane	ug/L	ND	1.0	03/28/16 03:02	
1,2-Dichloropropane	ug/L	ND	1.0	03/28/16 03:02	
1,3-Dichlorobenzene	ug/L	ND	1.0	03/28/16 03:02	
1,3-Dichloropropane	ug/L	ND	1.0	03/28/16 03:02	
1,4-Dichlorobenzene	ug/L	ND	1.0	03/28/16 03:02	
1,4-Dioxane (p-Dioxane)	ug/L	ND	150	03/28/16 03:02	
2,2-Dichloropropane	ug/L	ND	1.0	03/28/16 03:02	
2-Butanone (MEK)	ug/L	ND	5.0	03/28/16 03:02	
2-Chlorotoluene	ug/L	ND	1.0	03/28/16 03:02	
2-Hexanone	ug/L	ND	5.0	03/28/16 03:02	
4-Chlorotoluene	ug/L	ND	1.0	03/28/16 03:02	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	03/28/16 03:02	
Acetone	ug/L	ND	25.0	03/28/16 03:02	
Benzene	ug/L	ND	1.0	03/28/16 03:02	
Bromobenzene	ug/L	ND	1.0	03/28/16 03:02	
Bromochloromethane	ug/L	ND	1.0	03/28/16 03:02	
Bromodichloromethane	ug/L	ND	1.0	03/28/16 03:02	
Bromoform	ug/L	ND	1.0	03/28/16 03:02	
Bromomethane	ug/L	ND	2.0	03/28/16 03:02	
Carbon tetrachloride	ug/L	ND	1.0	03/28/16 03:02	
Chlorobenzene	ug/L	ND	1.0	03/28/16 03:02	
Chloroethane	ug/L	ND	1.0	03/28/16 03:02	
Chloroform	ug/L	ND	1.0	03/28/16 03:02	
Chloromethane	ug/L	ND	1.0	03/28/16 03:02	
cis-1,2-Dichloroethene	ug/L	ND	1.0	03/28/16 03:02	
cis-1,3-Dichloropropene	ug/L	ND	1.0	03/28/16 03:02	
Dibromochloromethane	ug/L	ND	1.0	03/28/16 03:02	
Dibromomethane	ug/L	ND	1.0	03/28/16 03:02	

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QUALITY CONTROL DATA

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

METHOD BLANK: 1696034

Matrix: Water

Associated Lab Samples: 92291412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	03/28/16 03:02	
Diisopropyl ether	ug/L	ND	1.0	03/28/16 03:02	
Ethylbenzene	ug/L	ND	1.0	03/28/16 03:02	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	03/28/16 03:02	
m&p-Xylene	ug/L	ND	2.0	03/28/16 03:02	
Methyl-tert-butyl ether	ug/L	ND	1.0	03/28/16 03:02	
Methylene Chloride	ug/L	ND	2.0	03/28/16 03:02	
Naphthalene	ug/L	ND	1.0	03/28/16 03:02	
o-Xylene	ug/L	ND	1.0	03/28/16 03:02	
p-Isopropyltoluene	ug/L	ND	1.0	03/28/16 03:02	
Styrene	ug/L	ND	1.0	03/28/16 03:02	
Tetrachloroethene	ug/L	ND	1.0	03/28/16 03:02	
Toluene	ug/L	ND	1.0	03/28/16 03:02	
trans-1,2-Dichloroethene	ug/L	ND	1.0	03/28/16 03:02	
trans-1,3-Dichloropropene	ug/L	ND	1.0	03/28/16 03:02	
Trichloroethene	ug/L	ND	1.0	03/28/16 03:02	
Trichlorofluoromethane	ug/L	ND	1.0	03/28/16 03:02	
Vinyl acetate	ug/L	ND	2.0	03/28/16 03:02	
Vinyl chloride	ug/L	ND	1.0	03/28/16 03:02	
Xylene (Total)	ug/L	ND	2.0	03/28/16 03:02	
1,2-Dichloroethane-d4 (S)	%	99	70-130	03/28/16 03:02	
4-Bromofluorobenzene (S)	%	97	70-130	03/28/16 03:02	
Toluene-d8 (S)	%	100	70-130	03/28/16 03:02	

LABORATORY CONTROL SAMPLE: 1696035

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.5	95	70-130	
1,1,1-Trichloroethane	ug/L	50	45.4	91	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.3	99	70-130	
1,1,2-Trichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethane	ug/L	50	44.7	89	70-130	
1,1-Dichloroethene	ug/L	50	46.4	93	70-132	
1,1-Dichloropropene	ug/L	50	47.1	94	70-130	
1,2,3-Trichlorobenzene	ug/L	50	49.5	99	70-135	
1,2,3-Trichloropropane	ug/L	50	48.5	97	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.0	98	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	52.5	105	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	50.7	101	70-130	
1,2-Dichlorobenzene	ug/L	50	45.4	91	70-130	
1,2-Dichloroethane	ug/L	50	41.7	83	70-130	
1,2-Dichloropropane	ug/L	50	45.7	91	70-130	
1,3-Dichlorobenzene	ug/L	50	46.6	93	70-130	
1,3-Dichloropropane	ug/L	50	47.1	94	70-130	

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QUALITY CONTROL DATA

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

LABORATORY CONTROL SAMPLE: 1696035

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	50	46.7	93	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	1000	518	52	71-125	L0
2,2-Dichloropropane	ug/L	50	41.5	83	58-145	
2-Butanone (MEK)	ug/L	100	99.6	100	70-145	
2-Chlorotoluene	ug/L	50	41.9	84	70-130	
2-Hexanone	ug/L	100	100	100	70-144	
4-Chlorotoluene	ug/L	50	45.4	91	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	107	107	70-140	
Acetone	ug/L	100	94.4	94	50-175	
Benzene	ug/L	50	47.3	95	70-130	
Bromobenzene	ug/L	50	45.2	90	70-130	
Bromochloromethane	ug/L	50	46.0	92	70-130	
Bromodichloromethane	ug/L	50	46.9	94	70-130	
Bromoform	ug/L	50	39.0	78	70-130	
Bromomethane	ug/L	50	43.6	87	54-130	
Carbon tetrachloride	ug/L	50	47.7	95	70-132	
Chlorobenzene	ug/L	50	46.0	92	70-130	
Chloroethane	ug/L	50	42.6	85	64-134	
Chloroform	ug/L	50	44.9	90	70-130	
Chloromethane	ug/L	50	40.3	81	64-130	
cis-1,2-Dichloroethene	ug/L	50	45.3	91	70-131	
cis-1,3-Dichloropropene	ug/L	50	46.9	94	70-130	
Dibromochloromethane	ug/L	50	45.7	91	70-130	
Dibromomethane	ug/L	50	48.7	97	70-131	
Dichlorodifluoromethane	ug/L	50	41.9	84	56-130	
Diisopropyl ether	ug/L	50	47.5	95	70-130	
Ethylbenzene	ug/L	50	46.1	92	70-130	
Hexachloro-1,3-butadiene	ug/L	50	46.6	93	70-130	
m&p-Xylene	ug/L	100	90.8	91	70-130	
Methyl-tert-butyl ether	ug/L	50	48.2	96	70-130	
Methylene Chloride	ug/L	50	44.4	89	63-130	
Naphthalene	ug/L	50	50.9	102	70-138	
o-Xylene	ug/L	50	45.0	90	70-130	
p-Isopropyltoluene	ug/L	50	46.5	93	70-130	
Styrene	ug/L	50	46.2	92	70-130	
Tetrachloroethene	ug/L	50	46.9	94	70-130	
Toluene	ug/L	50	45.9	92	70-130	
trans-1,2-Dichloroethene	ug/L	50	47.8	96	70-130	
trans-1,3-Dichloropropene	ug/L	50	46.8	94	70-132	
Trichloroethene	ug/L	50	45.7	91	70-130	
Trichlorofluoromethane	ug/L	50	47.5	95	62-133	
Vinyl acetate	ug/L	100	86.9	87	66-157	
Vinyl chloride	ug/L	50	47.7	95	50-150	
Xylene (Total)	ug/L	150	136	91	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

MATRIX SPIKE SAMPLE:	1696036	92291474010	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	18.4	92	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	20.7	104	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	17.1	85	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	18.9	94	70-130	
1,1-Dichloroethane	ug/L	1.9	20	22.3	102	70-130	
1,1-Dichloroethene	ug/L	ND	20	20.9	104	70-166	
1,1-Dichloropropene	ug/L	ND	20	20.7	103	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	18.4	92	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	17.4	87	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	19.4	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	15.8	79	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.3	97	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	18.4	92	70-130	
1,2-Dichloroethane	ug/L	ND	20	18.0	89	70-130	
1,2-Dichloropropane	ug/L	ND	20	20.0	100	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	19.9	99	70-130	
1,3-Dichloropropane	ug/L	ND	20	18.1	91	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	18.9	95	70-130	
1,4-Dioxane (p-Dioxane)	ug/L	ND	400	ND	4	70-130	MO
2,2-Dichloropropane	ug/L	ND	20	15.9	80	70-130	
2-Butanone (MEK)	ug/L	ND	40	30.8	77	70-130	
2-Chlorotoluene	ug/L	ND	20	19.8	99	70-130	
2-Hexanone	ug/L	ND	40	30.9	77	70-130	
4-Chlorotoluene	ug/L	ND	20	19.1	95	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	35.1	88	70-130	
Acetone	ug/L	ND	40	30.3	76	70-130	
Benzene	ug/L	ND	20	20.1	101	70-148	
Bromobenzene	ug/L	ND	20	19.0	95	70-130	
Bromochloromethane	ug/L	ND	20	20.1	101	70-130	
Bromodichloromethane	ug/L	ND	20	19.2	96	70-130	
Bromoform	ug/L	ND	20	16.0	80	70-130	
Bromomethane	ug/L	ND	20	22.5	113	70-130	
Carbon tetrachloride	ug/L	ND	20	19.5	97	70-130	
Chlorobenzene	ug/L	ND	20	19.0	95	70-146	
Chloroethane	ug/L	ND	20	21.6	108	70-130	
Chloroform	ug/L	ND	20	19.1	96	70-130	
Chloromethane	ug/L	ND	20	18.8	94	70-130	
cis-1,2-Dichloroethene	ug/L	11.6	20	32.9	107	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	18.1	90	70-130	
Dibromochloromethane	ug/L	ND	20	17.7	88	70-130	
Dibromomethane	ug/L	ND	20	19.3	97	70-130	
Dichlorodifluoromethane	ug/L	ND	20	19.9	99	70-130	
Diisopropyl ether	ug/L	ND	20	19.6	98	70-130	
Ethylbenzene	ug/L	ND	20	18.8	93	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	18.4	92	70-130	
m&p-Xylene	ug/L	ND	40	36.6	90	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.5	98	70-130	

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QUALITY CONTROL DATA

Project: 3705/28 KOP FLEX HANOVER, MD
Pace Project No.: 92291412

MATRIX SPIKE SAMPLE: 1696036		92291474010	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Methylene Chloride	ug/L	ND	20	20.0	100	70-130	
Naphthalene	ug/L	ND	20	17.3	87	70-130	
o-Xylene	ug/L	0.25J	20	18.0	89	70-130	
p-Isopropyltoluene	ug/L	ND	20	19.2	96	70-130	
Styrene	ug/L	ND	20	17.8	89	70-130	
Tetrachloroethene	ug/L	1.8	20	20.8	95	70-130	
Toluene	ug/L	ND	20	19.3	97	70-155	
trans-1,2-Dichloroethene	ug/L	ND	20	21.7	108	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	17.3	87	70-130	
Trichloroethene	ug/L	3.3	20	22.5	96	69-151	
Trichlorofluoromethane	ug/L	ND	20	21.4	107	70-130	
Vinyl acetate	ug/L	ND	40	26.4	66	70-130	M1
Vinyl chloride	ug/L	ND	20	22.4	112	70-130	
1,2-Dichloroethane-d4 (S)	%				97	70-130	
4-Bromofluorobenzene (S)	%				96	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1696037

Parameter	Units	92291474012	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
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	
1,4-Dioxane (p-Dioxane)	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	

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

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QUALITY CONTROL DATA

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

SAMPLE DUPLICATE: 1696037

Parameter	Units	92291474012 Result	Dup Result	RPD	Max RPD	Qualifiers
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
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)	%	95	96	1		
4-Bromofluorobenzene (S)	%	98	97	1		
Toluene-d8 (S)	%	100	98	2		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

QC Batch:	MSV/36221	Analysis Method:	EPA 8260B Mod.
QC Batch Method:	EPA 8260B Mod.	Analysis Description:	8260 MSV SIM
Associated Lab Samples:	92291412001		

METHOD BLANK: 1700673 Matrix: Water

Associated Lab Samples: 92291412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	04/02/16 13:10	
1,2-Dichloroethane-d4 (S)	%	99	50-150	04/02/16 13:10	
Toluene-d8 (S)	%	101	50-150	04/02/16 13:10	

LABORATORY CONTROL SAMPLE: 1700674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	19.0	95	71-125	
1,2-Dichloroethane-d4 (S)	%			97	50-150	
Toluene-d8 (S)	%			100	50-150	

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

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QUALIFIERS

Project: 3705/28 KOP FLEX HANOVER, MD

Pace Project No.: 92291412

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

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, Styrene, and Vinyl chloride.

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

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 3705/28 KOP FLEX HANOVER, MD
Pace Project No.: 92291412

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92291412001	MW-24D-HS	EPA 8260	MSV/36153		
92291412001	MW-24D-HS	EPA 8260B Mod.	MSV/36221		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: WSP

Project #: **WO#: 92291412**



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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: AP 3-25-16

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Thermometer: T1505 _____ Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Correction Factor: 0.0°C Cooler Temp Corrected (°C): 2.5 Biological Tissue Frozen? Yes No N/A

Temp should be above freezing to 6°C

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:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.	Note if sediment is visible in the dissolved container
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes Date/Time/ID/Analysis Matrix: <u>WSP</u>			
All containers needing acid/base preservation have been checked?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH >12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Samples checked for dechlorination	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased): _____			

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager SCURF Review: [Signature]

Date: 3/25/16

Project Manager SRF Review: [Signature]

Date: 3/25/16

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 | Parsons Brinckerhoff Office Address
13530 Dulles Technology Drive Suite 300
Herndon, VA 20171

Project Name: WSP | Parsons Brinckerhoff Contact Name

Project Location: Haveres, MD
WSP | Parsons Brinckerhoff Contact E-mail: Eric Johnson

Project Number & Task: 3705 / 28
WSP | Parsons Brinckerhoff Contact Phone: 903-709-6500
WSP | Parsons Brinckerhoff Contact E-mail: @wspgroup.com

Sampler(s) Name(s): Molly Lewis, Chris Evesci
Sampler(s) Signature(s):

Sample Identification: MW-24D-HS
Matrix: AQ
Collection Start: Date 3/22/16 Time 1315
Collection Stop: Date 1315 Time
Number of Containers: 6

Requested Analyses & Preservatives:
VOC
1,4-Dioxane

No. **003690**
WSP | PARSONS BRINCKERHOFF

Laboratory Name & Location: PACE, NC
Laboratory Project Manager: Kevin Gordon

Requested Turn-Around-Time:
 Standard
 24 HR
 48 HR
 72 HR
 _____ HR

Sample Comments: 92291412 001

Sample Identification	Matrix	Collection Start Date	Collection Start Time	Collection Stop Date	Collection Stop Time	Number of Containers	Requested Analyses & Preservatives
MW-24D-HS	AQ	3/22/16	1315			6	VOC 1,4-Dioxane

Relinquished By (Signature):	Date: 3/23/16	Time: 17:20	Received By (Signature):	Date: 3/22/16	Time: 9:55	Shipper/Method: FedEx	Tracking Number(s): 80922687 4182
Relinquished By (Signature):	Date:	Time:	Received By (Signature):	Date:	Time:	Shipper/Method:	Tracking 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)

Enclosure B – Historical Groundwater Sampling Results

Summary of COCs Detected in Groundwater Samples (2009 - 2015)

Onsite Monitoring Wells
Kop-Flex VCP Site
Hanover, Maryland (a)

Monitoring Well	Acetone	Benzene	Bromoform	2-Butanone (MEK)	Chloroethane	Chloroform	Chloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene	cis-1,2-Dichloroethene	1,4-Dioxane	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	Methylene Chloride	Methyl-tert-butyl Ether	Naphthalene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethane	Vinyl Chloride	Xylene (total)	Total VOCs	
MW-22D																															
Jun-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	89.2	NR	ND	66.4 (n)	ND	NA	ND	ND	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	167
Jun-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	27	NR	ND	29	ND	ND	NA	ND	ND	ND	ND	ND	ND	8	ND	ND	ND	ND	ND	64
Dec-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.5	ND	38	NR	ND	41	ND	ND	NA	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	94
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7	ND	34.2	NR	ND	31.8	ND	NA	ND	ND	ND	ND	ND	ND	6.5	ND	ND	ND	ND	ND	75
Dec-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.7	ND	43.5	NR	ND	35.3 (g)	ND	NA	ND	ND	ND	ND	ND	ND	8.4	ND	ND	ND	ND	ND	91
Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	ND	44.2	NR	ND	39.3	ND	NA	ND	ND	ND	ND	ND	ND	9.0	ND	ND	ND	ND	ND	96
Dec-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0	ND	27.0	NR	ND	22.8	ND	NA	ND	ND	ND	ND	ND	ND	4.2	ND	ND	ND	ND	ND	56
Jun-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	23.1	NR	ND	18.7	ND	NA	ND	ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND	47
MW-23D																															
Jun-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	29	ND	120	NR	ND	149	ND	ND	NA	ND	ND	ND	ND	ND	36	ND	ND	ND	ND	ND	334
Aug-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	39	2.2	130	NR	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	35	ND	ND	ND	ND	ND	206
Dec-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32	2.0	110	NR	ND	130	ND	ND	NA	ND	ND	ND	ND	ND	31	ND	ND	ND	ND	ND	305
Jul-13	ND	ND	ND	ND	ND	ND	1.5	ND	ND	ND	32.7	2.3	131	NR	ND	186.0	ND	NA	ND	ND	ND	ND	ND	ND	28.6	ND	ND	ND	ND	ND	382
Dec-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25.6	1.7	101	NR	ND	165.0 (h)	ND	ND	ND	ND	ND	ND	ND	ND	21.3	ND	ND	ND	ND	ND	315
Jun-14	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	29.1	2.3	101	NR	ND	132.0 (g)	ND	NA	ND	ND	ND	ND	ND	ND	24.7	ND	ND	ND	ND	ND	290
Dec-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	28.3	1.90	157.0	NR	ND	151.0	ND	NA	ND	ND	ND	ND	ND	ND	26.5	ND	ND	ND	ND	ND	365
Jun-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35.2	1.90	198	NR	ND	131.0 (n)	ND	NA	ND	ND	ND	ND	ND	ND	27.3	ND	ND	ND	ND	ND	393
MW-24D																															
Jun-12 (c)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,300	NR	ND	342	ND	ND	NA	ND	ND	ND	ND	ND	53	ND	ND	ND	ND	ND	1,695
Aug-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	72	13	1,600	NR	ND	6	NA	ND	NA	ND	ND	ND	ND	ND	60	1.5	13	ND	ND	ND	1,767
Dec-12	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	61	12	1,500	NR	ND	6.7	393	ND	NA	ND	ND	ND	ND	ND	62	1.5	16	ND	ND	ND	2,055
Jul-13	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	57.7	10.8	1,520	NR	ND	6.2	470.0	ND	NA	ND	ND	ND	ND	ND	48.7	1.3	12.4	ND	ND	ND	2,130
Dec-13 (c)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	47.4	ND	1,190	NR	ND	433.0	ND	NA	ND	ND	ND	ND	ND	ND	34.1	ND	10.1	ND	ND	ND	1,715
Jun-14 (c)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57.3	11.3	1,510	NR	ND	488.0	ND	NA	ND	ND	ND	ND	ND	ND	43.4	ND	14.2	ND	ND	ND	2,124
Dec-14 (l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	106.0	ND	2,640	NR	ND	657.0 (c)	ND	NA	ND	ND	ND	ND	ND	ND	60.9	ND	ND	ND	ND	ND	3,464
Jun-15 (l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	92.5	ND	2,100	NR	ND	728.0 (c)	ND	NA	ND	ND	ND	ND	ND	ND	53.3	ND	ND	ND	ND	ND	2,974
MW-27D																															
Sep-13	ND	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	0.17 J	ND	NR	ND	0.9 J	ND	NA	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	4
Dec-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NA	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NA	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
Dec-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
Jun-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
MW-26D																															
Mar-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.4	ND	98.2	NR	ND	118.0	ND	NA	ND	ND	ND	ND	ND	5.6	6.3	ND	ND	ND	ND	ND	241
Jul-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13.5	ND	120	NR	ND	99.2	ND	NA	ND	ND	ND	ND	ND	ND	6.6	ND	ND	ND	ND	ND	239
Dec-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.9	ND	51.5	NR	ND	60.7	ND	NA	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	122
Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	ND	42.4	NR	ND	39.8	ND	NA	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	89
Dec-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.5	ND	78.1	NR	ND	73.0	ND	NA	ND	ND	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	161
Jun-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1	ND	73.3	NR	ND	58.8	ND	NA	ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	142
MW-38																															
Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.5	ND	ND	NR	ND	51.8	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	61
Dec-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.7	ND	ND	NR	ND	68.7	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	77
Jun-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.2	ND	ND	NR	ND	56.7	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	65
MW-39																															
Jun-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2	NR	ND	6.3	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
Dec-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
Jun-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---

a/ all samples measured in ppb (ug/L);
 all samples collected using low-flow purging techniques
 e = as estimated below the detection limit;
 E = result exceeds calibration range
 ND = not detected; NA = Not analyzed
 NA = not analyzed
 NR = constituent not reported
 b/suspected laboratory contaminant
 c/ sample run at a 10x dilution
 d/ sample run at 50x dilution
 f/sample run at a 250x dilution
 g/sample run at a 2x dilution
 h/sample run at a 5x dilution
 i/sample run at a 25x dilution
 k/sample run at 200x dilution
 l/sample run at 20x dilution
 m/sample run at 4x dilution
 n/sample run at 2.5x dilution
 p/sample run at 400x dilution