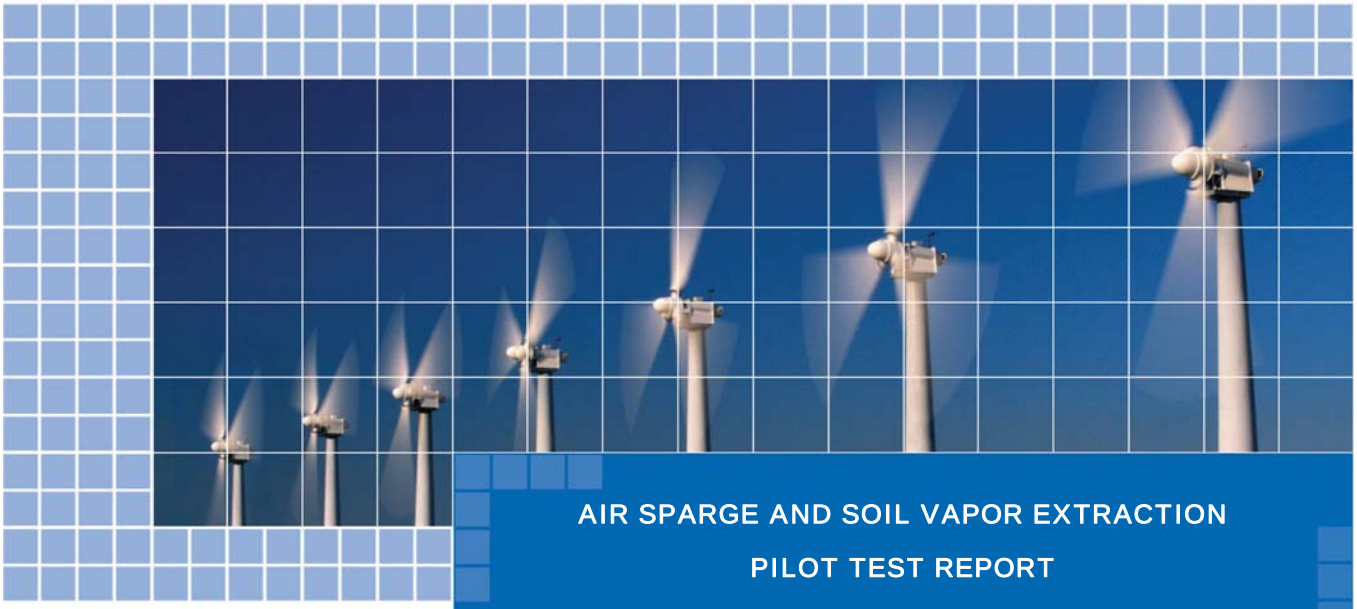

AIR SPARGE AND SOIL VAPOR EXTRACTION PILOT TEST REPORT FORMER HUCK MANUFACTURING FACILITY KINGSTON, NEW YORK

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1 Introduction

WSP Engineering of New York, P.C. [1] (WSP), on behalf of Federal-Mogul Corporation conducted an air sparging (AS) and soil vapor extraction (SVE) pilot test at the former Huck manufacturing facility in Kingston, New York from March 14 through March 21, 2010. All work was performed in accordance with the approved AS/SVE Pilot Test Work Plan, dated December 7, 2009. WSP has prepared this report to:

- describe the purpose, objectives, and data requirements of the AS/SVE test
- describe the test methodology and procedures
- present WSP's evaluation of the test data
- develop site-specific design criteria for the proposed AS/SVE system
- provide recommendations for a full-scale AS/SVE system based on the evaluation of the test data and site conditions

1.1 PURPOSE AND OBJECTIVES

The primary purpose of the pilot test was to determine the efficiency of removing dissolved volatile organic compounds (VOCs) from groundwater via air injection into saturated soils, and to evaluate the feasibility of removing VOCs from the unconsolidated subsurface materials (i.e. vadose zone soils) using vacuum extraction. The pilot test was conducted in an area of the site where the VOC concentrations in groundwater are the highest.

The primary test objectives included:

- evaluating whether AS and SVE are effective *in situ* remediation technologies for removing VOCs
- developing criteria for design of a full-scale system if AS and SVE are proven effective

1.2 DATA REQUIREMENTS

WSP conducted the pilot test to simulate the operating conditions of a full-scale AS system, SVE system, and AS/SVE systems operating in conjunction, thereby generating the site-specific data required for proper design of a full-scale system. The design parameters evaluated as part of the pilot test include:

1.2.1 AS Design Parameters

- Achievable range of air injection pressure and corresponding airflow rate: These parameters are determined with an AS stepped-rate test, where incremental air injection pressures (or steps) are applied to an injection well, and the stabilized air flow rates are measured at each corresponding step.
- Achievable air injection radius of influence (ROI): This parameter is determined with an AS constant-rate test, where the optimum injection pressure (as determined during the AS stepped-rate test) is applied to the injection well for an extended period of time. The effective ROI is the area surrounding the injection well in which air distribution is effectively achieved.

[1] WSP Engineering of New York, P.C. is an affiliate of WSP Environment & Energy LLC that is licensed to perform engineering in New York.

- Achievable dissolved VOC removal: Dissolved VOC removal is determined by laboratory analysis of groundwater samples collected before and after the pilot test. These data are used to demonstrate the influence of the system and as a secondary indicator of air injection ROI.

1.2.2 SVE Design Parameters

- Achievable range of vacuum and corresponding soil vapor extraction rate: This parameter is determined with an SVE stepped-rate test, where incremental vacuum levels (or steps) are applied to an extraction well, and the stabilized vapor flow rate and induced subsurface vacuum levels are measured at each corresponding applied vacuum level.
- Achievable vapor extraction ROI: This parameter is determined with an SVE constant-rate test, where the optimum vacuum level (as determined during the SVE stepped-rate test) is applied to the extraction well for an extended period of time. The effective ROI is the area surrounding a vapor extraction well in which vapor flow is effectively achieved. For this test, WSP defined the effective ROI as the subsurface area where vacuum greater than one percent of the applied vacuum is measured.
- Achievable VOC mass removal rates: The vapor-phase VOC mass removal rates are determined by both real-time measurements (i.e., photoionization detector [PID] readings) and laboratory analysis of vapor samples collected during the SVE constant-rate test. These data are used to estimate the VOC mass removal effectiveness of the system and, if required, select treatment equipment for a full-scale SVE system.

2 Test Scope of Work

The first part of the test evaluated the site-specific vacuum response of the subsurface and subslab zone by applying vacuum to a test extraction well, SV-1, using a blower system. The second part of the test consisted of applying pressurized air to the air injection well, AS-1, using an air compressor. During vacuum extraction and pressure injection, subsurface vacuum or pressure levels were measured at monitoring points (i.e. MP-1 through MP-4, MW-14, and MW-15) located at incremental distances from the test extraction and injection wells to estimate the effective ROI for each system. Figure 1 illustrates the pilot test area. In addition, samples of the extracted soil vapor were collected for laboratory analysis to evaluate the VOC vapor mass removal rate over the course of the SVE constant-rate and AS/SVE constant-rate tests.

2.1 PILOT TEST PROCEDURES

The pilot test was performed in the following five phases:

- SVE stepped-rate test
- SVE constant-rate test
- AS stepped-rate test
- AS constant-rate test and helium tracer test
- AS/SVE constant-rate test

2.1.1 SVE Stepped-Rate Test

The SVE stepped-rate test determines the optimum vacuum that achieves the greatest VOC mass removal per unit volume with the largest ROI. The stepped-rate test consisted of applying incremental vacuum levels to the test extraction well (SV-1) and measuring the stabilized vapor flow rate and subsurface vacuum levels corresponding to each applied vacuum level. The results of the stepped-rate test were used to select the optimum vacuum level and flow rate for the constant-rate test.

2.1.2 SVE Constant-Rate Test

The SVE constant-rate test evaluates the subsurface response to long-term vacuum extraction by applying the optimum vacuum level and flow rate to the test extraction well, as determined during the stepped-rate test, until subsurface conditions equilibrate. Data derived from the constant-rate test are used for selection of extraction and treatment equipment and determination of effective ROI. Vacuum levels at SV-1 and at each monitoring point, and the sustained vapor extraction flow rate, were measured at periodic intervals to evaluate response trends over time. Samples of the extracted vapor were also collected periodically for laboratory analysis to determine the VOC vapor mass removal rate.

2.1.3 AS Stepped-Rate Test

The AS stepped-rate test determines the optimum air injection pressure that achieves the greatest airflow with the largest ROI. The stepped-rate test consisted of applying incremental air pressures on the test injection well and measuring the stabilized airflow rate corresponding to each applied pressure. The results of the stepped-rate test were used to select the optimum air injection pressure and flow rate for the constant-rate test.

2.1.4 AS Constant-Rate Test and Helium Tracer Test

The AS constant-rate test evaluates the subsurface response to long-term air injection by applying the optimum air pressure and flow rate to the test injection well, as determined during the stepped-rate test. Data derived from the constant-rate test are used for selecting air injection equipment, determining ROI,

and estimating the operation time required to achieve remediation goals. Pressure levels at AS-1 and at each monitoring point, and the sustained air injection flow rate, were measured at periodic intervals to evaluate response trends over time. Groundwater samples collected immediately before and after the pilot test were used to evaluate the effect of air injection on dissolved VOC concentrations.

Helium tracer testing was also performed during of the AS constant-rate test. The tracer test involved injecting compressed helium gas into the AS-1 airstream and measuring helium gas concentrations at each monitoring point using a portable helium detector. The relative magnitude and distribution of measured helium concentrations was used as an indicator of ROI.

2.1.5 AS/SVE Constant Rate Test

The AS/SVE constant-rate test evaluates the subsurface response to operating the AS constant-rate and SVE constant-rate tests simultaneously. Data derived from the combined AS/SVE constant-rate test is used to determine the feasibility and effectiveness of operating both *in situ* technologies together, as well as to confirm the full-scale system design parameters measured during the individual AS and SVE constant-rate tests. Measurements collected during the AS/SVE constant rate test include air injection pressure and flow rate, vapor extraction vacuum and flow rate, and subsurface vacuum and pressure response. Samples of the extracted vapor were also collected for laboratory analysis to determine the VOC vapor mass removal rate during the AS/SVE constant rate test.

2.2 GROUNDWATER AND SOIL VAPOR SAMPLE COLLECTION AND ANALYSIS

2.2.1 Groundwater Samples

Groundwater samples were collected from monitoring points MP-1, MP-2, MP-3, and MP-4 to determine the influence on dissolved VOC concentrations resulting from short-term AS operation. The groundwater samples were collected before beginning any phases of the pilot test and after all phases of the pilot test were completed. Samples were analyzed using United States Environmental Protection Agency (EPA) Method 8260B for VOCs by Pace Analytical, Inc., of Greensburg, Pennsylvania.

2.2.2 Vapor Samples

Samples were collected from a sample port located on the SV-1 wellhead for quantitative laboratory analysis of VOCs. Vapor samples were collected with a syringe and placed into glass vials for VOC analysis by Microseeps of Pittsburgh, Pennsylvania, using Microseeps Method AM4.02. Some samples were also be collected using Entech Instruments, Inc., canisters and analyzed using EPA Air Method TO-15 for VOCs by Centek Laboratories, LLC, of Syracuse, New York. A total of six samples were collected during the SVE constant-rate test (3 samples by AM4.02, 3 samples by TO-15), and a total of five samples were collected during the AS/SVE constant-rate test (3 samples by AM4.02, 2 samples by TO-15). The extracted vapor was also monitored with a PID at periodic intervals to evaluate VOC concentration trends over time.

3 Pilot Test Wells and Equipment

Figure 1 provides a site plan of the test area and indicates the locations of the extraction well, air injection well, and monitoring points used for the test. Figure 2 provides a conceptual diagram of the test processes and equipment.

3.1 PILOT TEST EXTRACTION/INJECTION WELL AND MONITORING POINTS

One extraction well (SV-1), one air injection well (AS-1), and four monitoring point wells (MP-1 through MP-4) were installed to conduct the test (Figure 1). Well completion diagrams for the test wells are provided in Appendix A. All wells were installed as drive-point wells using a portable direct-push drilling rig and constructed of 2-inch inside-diameter (ID) black iron riser attached to a section of 0.010-inch continuous-wrap stainless-steel screen. The SVE well was installed to a depth of 11 feet below ground surface (bgs) with 8 feet of screen. The AS well was driven into the saturated zone to a depth of 25 feet bgs with 4 feet of screen. The monitoring points were installed at a depth of 17 feet bgs with 8 feet of screen that straddled the water table, which was measured at approximately 13 feet bgs during the pilot test.

The following table summarizes the construction of the test wells and monitoring points:

Well Designation	Total Depth (feet)	Length of Screen (feet)	Approximate Distance from AS-1 (feet)	Approximate Distance from SV-1 (feet)
SV-1	11	8	45	---
AS-1	25	4	---	45
MP-1	17	8	40	5
MP-2	17	8	30	15
MP-3	17	8	15	30
MP-4	17	8	30	55

Exisitng monitoring wells MW-14 and MW-15, which are screened entirely below the water table, were also used as monitoring points during the AS portion of the pilot test (Figure 1). Boring logs and well completion diagrams for MW-14 and MW-15 are also provided in Appendix A.

3.2 PILOT TEST SYSTEM

3.2.1 SVE Equipment

The SVE test was performed using the existing SVE equipment at the site. Vacuum-induced vapor flow was produced by the existing 25 horsepower, positive displacement Roots® RAI Series Model 615 blower capable of 550 standard cubic feet per minute (scfm) at 8.5 inches of mercury (Hg) vacuum. The existing system is equipped with an air inlet filter and an inlet 120-gallon vapor liquid separator with float switch-operated discharge pump. The blower was powered by the existing 480-volt, 3-phase electrical service provided inside the SVE equipment room. The existing SVE piping network was modified to allow for a temporary piping connection to SV-1. A new 6-inch, Schedule 40 PVC tee was installed within the

existing 6-inch PVC piping in the equipment room, prior to the inlet filter, to create a temporary connection point for SV-1, while still allowing for operation of the existing SVE system. The new piping was equipped with a 6-inch butterfly valve that could be closed after the pilot test to enable normal pulsing of the existing SVE system. The new piping connection was routed through the wall from the equipment room into the adjacent transformer room (Figure 1), where the hard PVC pipe was terminated and connected to SV-1 with approximately 200 feet of 3-inch diameter vacuum-rated flexible PVC hose, which was temporarily routed across the top of the storage lockers.

3.2.2 AS Equipment

Air injection was performed using a rented, skid-mounted rotary vane air compressor with a 1.75 horsepower motor (Becker Model DT 4.25) housed in the SVE equipment room. Approximately 245 feet of 1-inch diameter pressure-rated flexible PVC hose was installed to transfer air from the compressor to AS-1. The hose was temporarily routed on top of storage lockers and fastened to the 3-inch SVE hose using zip-ties. The compressor was powered by a 220-volt, single-phase, temporary electrical outlet utilizing the existing electrical service inside the SVE equipment room. The temporary outlet was installed by a certified electrician as part of the pilot test set up, and the outlet was disconnected after completion of the pilot test.

During the helium tracer test, helium was supplied by a 291 cubic-foot capacity compressed gas tank fitted with a pressure regulator. One-quarter-inch diameter galvanized steel piping and one-quarter-inch flexible pressure-rated hose were used to convey compressed helium gas from the tank into the AS-1 airstream. A second pressure regulator and two ball valves were installed in series in the helium transfer piping to adjust the helium injection pressure and flow rate.

3.3 PILOT TEST INSTRUMENTS AND MONITORING EQUIPMENT

The following table lists the instruments and field monitoring equipment used during the pilot test. The monitoring function and operating range of each item is also provided. Figure 2 provides a process schematic of the test system and indicates the location of each instrument within the test system. Vapor and airflow rates were calculated from velocity pressure (measured by pilot tube), static line pressure, and line temperature measured at the SV-1 and AS-1 wellheads.

Field Parameter	Instrument	Number of Instruments	Operating Range
Applied Vacuum SV-1	Dwyer Magnehelic™ differential pressure gage	3	0 to 5 inches of WC 0 to 25 inches of WC 0 to 100 inches of WC
Subsurface Vacuum at Monitoring Points	Dwyer Series 475 Mark III Handheld Digital Manometer	1	0 to 20 inches of WC
Applied Pressure AS-1	Dwyer Pressure Gage	1	0 to 20 psig
Differential Pressure at AS-1 and SV-1	Dwyer DS-300™ flow sensor with Dwyer Magnehelic™ differential pressure gage	4	0 to 25 inches of WC
	or		
	Dwyer Series 475 Mark III Handheld Digital Manometer		0 to 20 inches of WC
Line Temperature at AS-1 and SV-1	McMaster-Carr stemmed thermometer	2	0 to 200 °C
VOC Concentration (vapor)	MiniRae Multi-Rae™ PID with 10.6 eV Lamp	1	0 to 10,000 parts per million
Helium injection flow rate	Dwyer rotameter (MMA-9)	1	20-200 SCFH

Field Parameter	Instrument	Number of Instruments	Operating Range
Helium concentration in AS-1 airstream and monitoring points	Dielectric Helium/Hydrogen Multi-Gas Detector (MGD-2002)	1	0 -1,000,000 ppm
Helium injection pressure	McMaster-Carr Non-Relieving Miniature Air Regulator and Harris Products Compressed Gas Regulator (301-AR/CD60)	2	0 to 25 psig 0 to 4,000 psig
Groundwater chemistry parameters (temperature, pH, oxidation-reduction potential, dissolved oxygen)	Downhole multi-parameter meter (YSI Model 556)	4	Real-time readout for all parameters
Groundwater level	Heron water level meter	1	0 to 100 feet
Continuous groundwater level at MP-1 through MP-4	Aquistar PT2X downhole pressure transducer	4	Data logger 0-30 psig

4 Test Data Evaluation

WSP's evaluation of the test data is presented below and graphically in Exhibits 1 through 13. These analyses include vacuum-flow response curves, graphical estimates of effective AS and SVE ROI, groundwater level trend charts, and graphs of VOC vapor mass removal rate trends. Tables 1 and 2 summarize the analytical results for the vapor samples collected during the SVE and AS/SVE constant-rate tests. Tables 3 and 4 provide estimates of VOC mass removal rates that are calculated from the VOC concentrations summarized in Tables 1 and 2. Table 5 summarizes the baseline and post-test groundwater samples collected at MP-1 through MP-4. The laboratory reports for the vapor sample and aqueous sample analyses are provided in Appendix B and Appendix C, respectively. Tabular summaries of the field measurements and telemetry readings taken during the test are provided in the data sheets in Appendix D.

4.1 BACKGROUND GROUNDWATER LEVEL MONITORING

Before commencing with pilot test activities, WSP monitored background groundwater levels in monitoring points MP-1 through MP-4 to determine the range of groundwater fluctuations under ambient conditions. Groundwater elevation data were collected in 20-minute intervals using dedicated electronic pressure transducers. Initial depth-to-groundwater measurements were collected from each monitoring point using an audible electronic water level indicator. Exhibit 1 displays the results of the 24-hour background groundwater level-monitoring test. During the 24-hour monitoring period, background water levels rose approximately 0.03-feet in each monitoring point; however, no significant fluctuations in groundwater level were observed in any of the monitoring points.

4.2 SVE STEPPED-RATE TEST

Exhibit 2 depicts the site-specific response of vapor flow rate to applied vacuum using data generated from the SVE stepped-rate test. These measurements are summarized in the SVE Stepped-Rate Test Data Sheet provided in Appendix D. The stepped-rate test was completed in eight steps at the following applied vacuum levels: 5.3, 11.9 16.2, 20.5, 27.0, 31.5, 47.5, and 56.0 inches of water column (inches WC). The maximum applied vacuum achieved during the test was 56 inches WC, which produced the largest observed vapor flow rate of 177 standard cubic feet per minute (scfm). During the final step, the vacuum at the vacuum blower inlet reached 7.9 inches of Hg. WSP increased the applied vacuum slightly over 56 inches of WC, but the resulting inlet vacuum was outside the performance range of the blower, marking the end of the stepped-rate test. Because the vacuum-flow response curve indicated that flow increased steadily with applied vacuum, the maximum achievable applied vacuum and corresponding flow rate were selected for the SVE constant-rate test.

4.3 SVE CONSTANT-RATE TEST

4.3.1 Vacuum-Flow Response

The SVE constant-rate test was initiated at an applied vacuum of 57 inches WC at SV-1. However, because of performance issues caused by operating the blower at the end of the performance curve, WSP opted to decrease the applied vacuum to Step 7 of the SVE-stepped rate test, or approximately 48 inches WC. During the course of the SVE constant-rate test, applied vacuum stabilized at 46 inches WC, which corresponded to a measured sustained vapor flow rate of approximately 157 scfm.

4.3.2 Vacuum Influence Measurements (Vadose Zone)

Exhibit 3 depicts the vacuum influence measured in MP-1 through MP-4 during the SVE constant-rate test and provides an estimate of effective extraction ROI in the vadose zone. These measurements are summarized in the SVE Constant-Rate Data Sheet provided in Appendix D. The top chart in Exhibit 3 displays vacuum measurements versus distance from SV-1 on a linear scale. The second chart in Exhibit 3 displays vacuum measurements versus distance from SV-1 on a logarithmic scale to provide a straight-line analysis of the data. WSP defined effective ROI as one percent of applied vacuum (46 inches WC), or 0.46 inch WC. As shown on Exhibit 3, the estimated effective vacuum ROI for the vadose zone is approximately 28 feet.

4.3.3 Groundwater Level Trends

Exhibit 4 displays groundwater level trends measured in MP-1 through MP-4 during the SVE stepped-rate and SVE constant-rate tests. Water level measurements were recorded in 10-minute intervals using the pressure transducers to evaluate upwelling of the water table due to applied subsurface vacuum. Groundwater fluctuations of less than 0.04 feet were observed during the SVE tests, indicating that upwelling is insignificant at an applied vacuum up to 46 inches WC.

4.3.4 Estimated VOC Vapor Mass Removal Rates

Exhibit 5 summarizes the trend of estimated VOC vapor mass removal rates over the course of the SVE constant-rate test. The mass removal rate calculations used to derive this graph are provided in Table 3. In summary, the vapor mass removal rate decreased over the first half of the test from 1.25 pounds per day to 0.69 pounds per day, and then gradually increased to 0.90 pounds per day at the end of the 24-hour test. The majority of the extracted vapor mass was comprised of three VOCs: trichloroethene (TCE), tetrachloroethene (PCE), and cis-1,2-dichloroethene (cis-1,2-DCE). Total vapor mass removed during the SVE constant rate test was approximately 0.8 pounds.

As shown on Tables 1 and 3, samples designated SVE-4A-031710 (analyzed by Centek Laboratories, LLC using EPA Method TO-15) and SVE-4B-031710 (analyzed by Microseeps, Inc. using Microseeps Method AM4.02) were collected simultaneously to allow for comparison of analytical results between the respective analysis methods. In general, EPA Method TO-15 yielded slightly higher VOC concentrations compared to Microseeps Method AM4.02. The Microseeps Method AM4.02 also reported fewer VOC detections outside the chemicals of interest (TCE, PCE, and cis-1,2-DCE). Overall, the results from the two analysis methods correlated well, indicating that inclusion of data from either lab for mass removal calculation is acceptable.

4.4 AS STEPPED-RATE TEST

Measurements from the AS stepped-rate test are summarized in the AS Stepped-Rate Test Data Sheet provided in Appendix D. The depth to water measured at AS-1 was 13.09 feet bgs, corresponding to a saturated thickness of 7.91 feet above the top of the injection well screen. This saturated thickness equates to a hydrostatic breakout pressure of approximately 3.4 psi.

The AS stepped-rate test was completed in two steps at the following applied pressure levels: 4.5 psi and 4.8 psi. Step 1 was adjusted to 4.5 psi by reducing the injection flow using a butterfly valve installed in the air transfer piping. The corresponding airflow rate for step 1 was measured at 6 scfm. Step 2 was conducted with the air compressor at its maximum performance (i.e. the airflow was not throttled by valve adjustment), which yielded an applied pressure of 4.8 psi and corresponding airflow rate of 13 scfm. The maximum achievable pressure and corresponding flow rate were selected for the AS constant-rate test.

4.5 AS CONSTANT-RATE TEST

4.5.1 Applied Pressure – Flow Response

The AS constant-rate test was initiated at the maximum, un-throttled discharge of the air compressor. The initial applied wellhead pressure at AS-1 was 4.8 psi, which corresponded to an injection airflow rate of 13 scfm. Over the course of the 24-hour test, the applied pressure stabilized at 4.2 psi and airflow stabilized at 12 scfm.

4.5.2 Subsurface Air Pressure Measurements

Pressure measurements collected from MP-1 through MP-4 during the AS constant-rate test were used to evaluate the spatial distribution of air injected at AS-1. The pressure measurements, which indicate the relative flow of air from the saturated zone into the vadose zone at each location, are summarized in the AS Constant-Rate Test Data Sheet (Appendix D). Exhibit 6 illustrates that the measureable pressure influence in the vadose reached distances up to 40 feet from AS-1. Pressure measurements outside the AS ROI were likely the result of air displacement in the vadose zone.

4.5.3 Groundwater Elevation Measurements

Exhibit 7 depicts depth to groundwater trends measured in MP-1 through MP-4 throughout the AS stepped-rate and AS constant-rate test. Groundwater measurements were recorded with the pressure transducers to evaluate mounding of the water table due to air injection.

Soon after start up of the air compressor, an increase in groundwater levels was observed. After a period of flow adjustment at AS-1, step 1 of the stepped-rate test began. Groundwater levels in MP-1, MP-2, and MP-3 increased (i.e. the depth to water bgs decreased) rapidly before leveling off after approximately 30 minutes of injection. After a brief down period, step 2 was initiated and groundwater levels again initially raised sharply as water volume within AS-1 was injected into the aquifer. However, this period of mounding dissipated after approximately 20 minutes of injection. During Step 2 the groundwater levels at MP-1, MP-2, MP-3 and MP-4 increased by approximately 0.14 feet, 0.21 feet, 0.20 feet and 0.01 feet, respectively.

Because step 2 was chosen as the optimal setting for the constant-rate test, no period of shutdown occurred between the stepped-rate and constant-rate test. Accordingly, after approximately three hours of operation during the AS constant-rate test, groundwater levels began to equilibrate to the background levels. A slight fluctuation in groundwater level was apparent at the beginning and end of the helium tracer test as a result of the overall change in airflow with the addition of helium to the subsurface.

The trends in Exhibit 7 indicate a direct correlation between short-term groundwater level change and distance from AS-1. MP-3, located approximately 15 feet from AS-1 experienced the largest degree of temporary mounding with a water level increase of 0.34 feet. MP-2, located approximately 30 feet from AS-1, and MP-1, approximately 40 feet from AS-1, experienced temporary mounding of the water table of 0.33 feet and 0.24 feet, respectively. However, the groundwater level increase at MP-4, also located approximately 30 feet from AS-1, was only 0.05 feet, possibly indicating local heterogeneity in the formation at MP-4 that results in decreased groundwater level response.

4.5.4 Groundwater Chemistry Measurements

Groundwater chemistry parameters, including dissolved oxygen (DO), pH, and oxidation-reduction potential, were measured throughout the course of the AS stepped-rate and AS constant-rate tests as potential indicators of ROI. Exhibit 8 displays trends of DO concentrations measured in the MP wells during the AS stepped-rate and AS constant-rate tests.

With a background DO concentration of approximately 4.5 milligrams per liter (mg/l), MP-4 contained the highest DO concentration of the four monitoring points. Background DO concentrations in MP-1 through MP-3 ranged between 0.5 and 1.6 mg/l.

Within the first hour of initiating air injection in AS-1 at the start of the stepped-rate test, DO concentrations in all four monitoring point wells began to decrease, potentially because of groundwater displacement at AS-1. Approximately one hour after the start of the AS constant-rate test, DO concentrations in MP-2 and MP-4 began increasing. Throughout the remainder of the test, all four monitoring points showed relatively stable to slightly increasing DO concentrations. At the conclusion of the test, the DO concentrations at MP-2 and MP-4 were equal to background concentrations, and final DO concentrations in MP-1 and MP-3 were slightly lower than background concentrations.

4.5.5 Helium Tracer Test

Two helium tracer tests were conducted during the AS constant-rate test to further evaluate injection air ROI. Results from the helium tests are summarized in Exhibit 9 and the data is summarized on the AS stepped-rate and AS constant-rate data sheets in Appendix D. The first helium tracer test was conducted over a five-hour period at the start of the AS constant-rate test. The helium tracer test involved bleeding helium into the injection air and measuring helium concentrations at the monitoring points. During the first helium tracer test, injected helium concentrations at AS-1 were initiated at 3,400 parts per million (ppm) and were incrementally increased to 125,000 ppm.

Helium was first detected 2.75 hours into the first helium tracer test at MP-4 (500 ppm). After 4.25 hours of helium injection at AS-1, helium was detected at MP-3 at 550 ppm. Measured helium concentrations in MP-3 and MP-4 continued to increase after the first helium test was terminated after 4.5 hours of injection on March 18, 2010. On March 19, 2010, before starting the second helium injection, helium measurements were collected from each monitoring point to determine if helium accumulated in each well overnight. Helium was observed in monitoring points MP-1 through MP-4 and MW-15 at concentrations ranging from 575 ppm in MP-1 to 10,600 ppm in MP-2.

A second helium tracer test was conducted at the end of the AS constant-rate test. This test was conducted over a 4-hour period with an injected helium concentration of 2,000 ppm. During the second helium test, helium concentrations in MP-2 and MW-15 remained stable at concentrations observed after the conclusion of the first helium test. Helium concentrations in MP-3 and MP-4 showed a decreasing trend, while MP-1 showed an increasing trend. Near the end of the second helium test, a low concentration of helium (50 ppm) was measured in SV-1. No helium was detected in MW-14 during either of the helium tracer tests.

Although helium concentrations detected at the monitoring points were relatively low compared to injection concentrations, the data from the helium tracer tests indicate that injected air from AS-1 not only reached the vadose zone, but was also uniformly distributed laterally. Helium was measured at six of the seven monitoring points at concentrations ranging from 50 to 11,000 ppm. The results of the helium tracer tests demonstrate that the injected air within the ROI of the injection well was spatially well distributed and indicate that preferential flow patterns that would prohibit successful air sparging did not develop. Furthermore, the highest concentrations of helium were detected at MP-2, MP-3, and MP-4, located within 30 feet of AS-1. Helium concentrations in MP-1, MW-15, and SV-1 (all greater than 30 feet from AS-1) were lower and showed a decreasing trend with distance from AS-1.

4.5.6 Dissolved VOC Concentrations

Groundwater samples were collected from monitoring points MP-1 through MP-4 for analysis of VOCs before the start of the pilot test and after the conclusion of the test to evaluate changes in dissolved VOC concentrations due to AS operation. Table 5 summarizes the baseline and post-test groundwater sample results for cis-1,2-DCE, trans-1,2-DCE, TCE, and PCE.

The total baseline VOC concentrations at MP-1, MP-2, MP-3, and MP-4 were 894 micrograms per liter (μg/l), 4,660 μg/l, 3,117 μg/l, and 450 μg/l, respectively. TCE and PCE comprised the majority of VOC mass in each sample. Compared to baseline concentrations, post-test total VOC concentrations in MP-1 increased by 568 μg/l, or approximately 39 percent. At MP-2 and MP-4, total VOC concentrations

increased by 154 μg/l (3 percent) and 93 μg/l (17 percent), respectively. At MP-3, total VOC concentrations decreased by 573 μg/l (23 percent), primarily because of a 35 percent reduction in the PCE concentration. Comparison of the baseline and post-test groundwater sample results corroborates the other lines of evidence from the pilot test, which indicate a fairly uniform distribution of airflow around the sparge well. Over the short duration of the test, no conclusions can be drawn regarding the efficiency of VOC mass transfer and removal by the sparged air; however, the significant changes in VOC concentrations (both up and down) at the monitoring points are an indicator of groundwater mixing caused by the introduction of air into the subsurface.

4.6 AS/SVE CONSTANT RATE TEST

After completing testing of the individual SVE and AS components, WSP commenced a combined AS/SVE test. The AS/SVE constant-rate test involved operation of the AS and SVE components at the optimal settings determined from the individual AS and SVE tests.

4.6.1 Estimated VOC Vapor Mass Removal Rates

Exhibit 10 illustrates the trend of estimated VOC vapor mass removal rates over the course of the AS/SVE constant-rate test. A summary of vapor sample concentrations and mass removal rate calculations used to derive this graph are summarized in Table 4. Over the first hour of operation, the mass removal rates increased from 0.76 pounds per day (lb/day) to 1.01 lb/day, likely a result of the additional VOCs sparged from the groundwater. During the remaining 23 hours of the AS/SVE test, VOC mass removal stabilized between 0.64 lb/day and 0.40 lb/day. As presented in Exhibit 11, the AS/SVE constant-rate test vapor mass removal rates were similar to those observed during the SVE constant-rate test. Total vapor mass removed during the AS/SVE constant rate test was approximately 0.7 pounds.

4.6.2 Subsurface Air Influence Measurements

Performance measurements collected during the AS/SVE constant-rate test were used to evaluate the distribution of air injected at AS-1 and the applied vacuum at SV-1. These vadose zone pressure/vacuum measurements, recorded at MP-1 through MP-4, are summarized in the AS/SVE Constant-Rate Test Data Sheet provided in Appendix D.

Throughout the duration of the AS/SVE constant-rate test, vadose zone vacuum/pressure measurements remained notably consistent. MP-1, MP-2, and MP-3 were subject to vacuum throughout the test at 3.3 inches WC, 1.3 inches WC, and 0.4 inches WC, respectively. MP-4 was subject to a positive pressure of 0.03 inches WC during the test. Exhibit 12 indicates that at the SV-1 applied vacuum of 45 inches WC during the AS/SVE constant-rate test, the vacuum ROI was approximately 29 feet. This observation indicates that SVE vacuum ROI is maintained with the addition of AS.

4.6.3 Groundwater Elevation Measurements

Exhibit 13 depicts the groundwater elevation trends measured in MP-1 through MP-4 throughout the AS/SVE constant-rate test. The air compressor remained operating between the end of the AS constant-rate test and the start of the AS/SVE constant-rate test. Throughout the duration of the test, groundwater elevations varied by only 0.015 feet, confirming that mounding of the water table is negligible with combined AS/SVE operation. After deactivation of the pilot test equipment at the end of the test, an instantaneous decrease in water levels was observed. This decrease is likely attributed to the rapid depressurization and water level rebound in AS-1. Within 15 minutes of test termination, groundwater levels began to recover, and after one hour of recovery time at the end of the transducer-recording period, groundwater levels had nearly recovered to background levels. The water level changes at MP-4 were subdued compared to MP-1 through MP-3, and, as discussed in section 4.5.3, likely indicates a local heterogeneity at MP-4.

4.6.4 Groundwater Chemistry Measurements

Groundwater chemistry parameters, including DO, pH, and oxidation-reduction potential, were measured throughout the AS/SVE constant-rate test as potential indicators of ROI. Exhibit 8 displays trends of DO concentrations measured in the MP wells during the AS/SVE constant-rate test. During the 24-hour test, the DO in MP-2 increased 1.02 mg/l and the DO in MP-4 increased 0.09 mg/l. MP-3 decreased 0.01 mg/l and DO in MP-4 decreased 0.13 mg/l. Over the short duration of the pilot test, no conclusions can be drawn from these data. Over a longer period, DO levels would be expected to increase as a result of the injected air.

4.6.5 SVE Helium Recovery

During the AS/SVE constant-rate test, helium concentration at the SV-1 wellhead was monitored continuously to evaluate the recovery of helium produced by the AS constant-rate test injections. Helium concentrations recovered during the AS/SVE constant-rate test ranged from 1,150 ppm at the beginning of the test to 75 ppm at the end of the test. The helium recovery at SV-1 indicates that SVE will effectively recover soil vapor produced by AS operation.

5 Recommended Conceptual System Design

The AS/SVE pilot test indicates that AS/SVE is an effective technology for removing residual VOCs from the vadose zone and removing dissolved VOCs in groundwater. Relatively high vapor extraction rates were achieved during the SVE test at relatively low applied vacuum levels. Therefore, it may be feasible to use the two existing vacuum blowers with activated carbon, which are capable of high air volumes at low vacuum. In addition, the applied vacuum and flow stabilized rapidly during the SVE stepped-rate and SVE constant-rate tests, and varied by less than 5 percent during the constant-rate test. These data, in conjunction with the fairly uniform vacuum measurements collected from the monitoring points, indicate that the subsurface of the test area responds uniformly to vacuum extraction and without significant channeling or short-circuiting. Furthermore, vapor sample analytical results from the SVE constant-rate test confirmed that VOCs in vadose zone soils can be removed efficiently by SVE. Subsurface vacuum measurements indicate a ROI of approximately 28 feet.

Results from the AS stepped-rate test indicate that increased flow rates can be achieved without significant increase in applied pressure. The applied pressure during the test (4.6 psi) can be readily achieved with conventional compressors that would be cost-effective for a full-scale system. The achieved injection flow rate of 13 scfm is within the typical range of flows for successful sparging in sandy formations. This flow rate is high enough to achieve meaningful mass transfer of VOCs from the aqueous to the vapor phase, but not so high as to indicate significant short-circuiting and/or highly irregular radial distribution. The observation of dissolved VOC concentration changes, helium response, and applied pressure indicate a ROI of approximately 20 feet.

Differences in the groundwater elevation measurements at the four monitoring point wells indicate the potential presence of localized subsurface heterogeneities in the test area. However, the results of the final helium tracer test demonstrate that the injected air was spatially well distributed around the injection well and indicate that subsurface heterogeneities are not so severe as to cause short-circuiting and prohibit successful air sparging. To ensure effective AS treatment throughout the entire depth of the dissolved VOC plume, WSP recommends installing the AS wells four feet deeper to a depth of 29 feet bgs, placing the AS well screen approximately 5 feet below the bottom of the groundwater plume. Installation of deeper AS wells may serve to slightly increase the effective AS ROI.

Operating flow, vacuum, and pressure varied little between the AS and SVE constant-rate tests and the combined AS/SVE constant-rate test. The difference in vacuum influence between the SVE constant-rate and AS/SVE constant rate tests, at MP-1, MP-2, and MP-3, varied less than 0.09 inches of WC. Furthermore, the ROI of the SVE system remained consistent during combined AS/SVE operation, indicating that capture of volatilized VOCs from the AS wells will be successful. Groundwater fluctuation due to mounding and upwelling was minimal and should not hinder the performance of a full-scale system.

Based on these evaluations, WSP recommends proceeding with the design of a full-scale AS/SVE system that will target the highest VOC concentrations at the site. To provide effective treatment, WSP recommends spacing full-scale system SVE wells approximately 50 feet apart and AS wells approximately 30 feet apart. WSP's proposed preliminary AS/SVE well layout is provided in Figure 3. The proposed AS/SVE wells are generally located in the aisles between storage units, which are accessible with a portable drill rig. These well locations are subject to change in the field based on site access and may be adjusted, where possible, to maximize the size of the treatment area. The isoconcentration contour for 1,500 µg/l is provided on Figure 3 to illustrate the location of the onsite groundwater source area and does not represent the limits of a proposed treatment area. Furthermore, it should be noted that the recommendation in this document to increase the AS well depth to 29 feet bgs for the full-scale system may result in a larger air sparge ROI than is shown on Figure 3.

Figures

LEGEND

- TEMPORARY SVE PIPING ROUTE
- TEMPORARY AS PIPING ROUTE
- MW-12 EXISTING GROUNDWATER MONITORING WELL LOCATION
- AIR SPARGING WELL LOCATION
- SVE WELL LOCATION
- MONITORING POINT

MW-15

MP-4

AS-1 MP-3 MP-2 MP-1 SV-1

MW-14

AS COMPRESSOR

SVE EQUIPMENT ROOM

TRANSFORMER ROOM

6"ø PVC PIPE

CONNECTION TO EXISTING SVE SYSTEM

BUTTERFLY VALVE

N

0 25 50

SCALE IN FEET

Drawn By: EGC

Checked: SP

Approved: JS

DWG Name: 138008148

FORMER HUCK MANUFACTURING FACILITY
KINGSTON, NEW YORK

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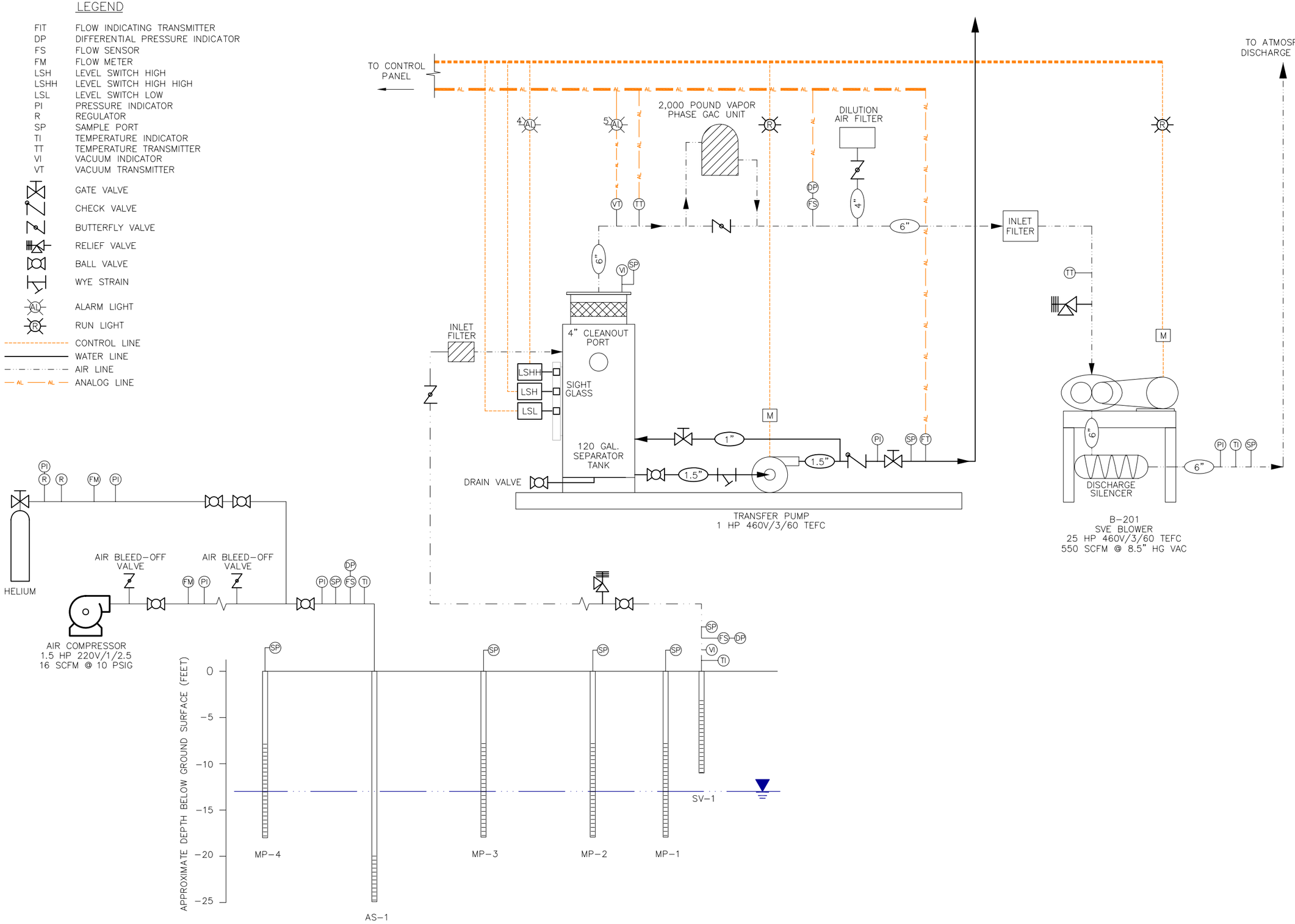
Figure 1

SITE PLAN AND
PILOT TEST WELL LOCATIONS

WSP Engineering of New York, P.C.
300 Trade Center, Suite 4690
Woburn, Massachusetts 01801
(781) 933-7340

LEGEND

FIT	FLOW INDICATING TRANSMITTER
DP	DIFFERENTIAL PRESSURE INDICATOR
FS	FLOW SENSOR
FM	FLOW METER
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH HIGH
LSL	LEVEL SWITCH LOW
PI	PRESSURE INDICATOR
R	REGULATOR
SP	SAMPLE PORT
TI	TEMPERATURE INDICATOR
TT	TEMPERATURE TRANSMITTER
VI	VACUUM INDICATOR
VT	VACUUM TRANSMITTER
	GATE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	RELIEF VALVE
	BALL VALVE
	WYE STRAIN
AL	ALARM LIGHT
R	RUN LIGHT
	CONTROL LINE
	WATER LINE
	AIR LINE
AL AL	ANALOG LINE



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Drawn By: EGC
Checked: SP
Approved: JS
DWG Name: 138008147

Figure 2

CONCEPTUAL TEST PROCESS AND EQUIPMENT DIAGRAM

WSP Engineering of New York, P.C.
300 Trade Center, Suite 4690
Woburn, Massachusetts 01801
(781) 933-7340

NOTES:
1. CONCENTRATION CONTOUR BASED ON GROUNDWATER SAMPLES FOR VOC ANALYSIS COLLECTED IN JULY 2008.
2. ISOCONCENTRATION CONTOUR FOR 1,500 ug/l IS SHOWN TO ILLUSTRATE LOCATION OF ONSITE SOURCE AREA AND DOES NOT REPRESENT LIMITS OF A PROPOSED TREATMENT AREA.
3. PROPOSED VAPOR EXTRACTION WELL AND AIR SPARGE WELL LOCATIONS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON SITE ACCESS.
4. THE LOCATIONS OF THE WELLS INSTALLED FOR THE PILOT TEST ACTIVITIES ARE APPROXIMATE.

LEGEND
- GROUNDWATER MONITORING WELL
- AIR SPARGING WELL
- SVE WELL
- MONITORING POINT
- PROPOSED VAPOR EXTRACTION WELL
- PROPOSED AIR SPARGING WELL
- ROI RADIUS OF INFLUENCE

MW-15
MP-4
AS-1
MP-3
MP-2
MP-1
SV-1
MW-14
1,500
TOTAL VOC CONCENTRATIONS IN GROUNDWATER HIGHER THAN 1,500 ug/l
PROPOSED EXTRACTION WELL WITH ROI (28 FEET)
PROPOSED AIR SPARGING WELL WITH ROI (20 FEET)
TRANSFORMER ROOM
SVE EQUIPMENT ROOM

0 25 50
SCALE IN FEET

Drawn By: EGC
Checked: SP
Approved: JS
DWG Name: 138008147

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Figure 3
PROPOSED AS/SVE WELL LOCATIONS
(PRELIMINARY)

WSP
Engineering of New York, P.C.
300 Trade Center, Suite 4690
Woburn, Massachusetts 01801
(781) 933-7340

Tables

Table 1
SVE Constant-Rate Test -
Vapor Sample Laboratory Analytical Results
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Sample ID:	**SVE-1-031710**	**SVE-2-031710**	**SVE-3-031710**	**SVE-4A-031710**	**SVE-4B-031710**	**SVE-5-031810**
Laboratory:	Centek	Microseeps	Microseeps	Centek	Microseeps	Centek
Date:	3/17/2010	3/17/2010	3/17/2010	3/17/2010	3/17/2010	3/18/2010
Time:	0854	0954	1254	1855	1855	0855
VOCs (ppmv)						
Acetone	0.40	1.0 U	1.0 U	0.85	1.0 U	0.41
2-Butanone (MEK)	1.2	0.50 U	0.50 U	0.73	0.50 U	0.64
Chloroform	0.043	0.060	0.050	0.029	0.036	0.022
cis-1,2-Dichloroethene	0.65	0.55	0.49	0.57	0.38	0.48
trans-1,2-Dichloroethene	0.013	0.015	0.010 U	0.011	0.010 U	0.009
Methyl Isobutyl Ketone	0.0052 J	1.0 U	1.0 U	0.0046 J	1.0 U	0.0047 J
Tetrachloroethene	3.7	2.8	2.0	2.7	1.4	3.6
Tetrahydrofuran	2.5	NA	NA	1.6	NA	1.3
Toluene	0.0022 J	0.10 U	0.10 U	0.0020 J	0.10 U	0.0029 J
Trichloroethene	6.7	7.6	5.8	4.2	4.0	5.5
m&p-xylene	0.0052 J	0.20 U	0.20 U	0.0049 J	0.20 U	0.0053 J
o-xylene	0.0016 J	0.10 U	0.10 U	0.0016 J	0.10 U	0.0018 J

a/ Abbreviations: ppmv = parts per million by volume; U = Not detected at the reporting limit; J = Analyte detected at or below quantitation limit. NA = not analyzed for; Centek = Centek Laboratories, LLC; Microseeps = Microseeps, Inc.

b/ Only compounds detected in one or more samples are included in this table.

Table 2
AS/SVE Constant-Rate Test -
Vapor Sample Laboratory Analytical Results
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Sample ID:	**AS/SVE-1-031910**	**AS/SVE-2-031910**	**AS/SVE-3-031910**	**AS/SVE-4-032010**	**AS/SVE-5-032010**
Laboratory:	Microseeps	Centek	Microseeps	Microseeps	Centek
Date:	3/19/2010	3/19/2010	3/19/2010	3/20/2010	3/20/2010
Time:	1330	1425	1825	0825	1325
VOCs (ppmv)					
Acetone	1.0 U	0.26	1.0 U	1.0 U	0.16
2-Butanone (MEK)	0.50 U	0.60	0.50 U	0.50 U	0.35
Chloroform	0.045	0.027	0.032	0.023	0.014
Chloromethane	2.0 U	0.0054	2.0 U	2.0 U	0.0050 U
cis-1,2-Dichloroethene	0.52	0.57	0.47	0.35	0.38
trans-1,2-Dichloroethene	0.011	0.011	0.010 U	0.010 U	0.0063
Heptane	NA	0.0050 U	NA	NA	0.0012 J
Isopropyl Alcohol	NA	0.0050 U	NA	NA	0.0079
Methyl Isobutyl Ketone	1.0 U	0.0019 J	1.0 U	1.0 U	0.0020 J
Tetrachloroethene	2.9	4.3	2.5	1.3	2.6
Tetrahydrofuran	NA	0.67	NA	NA	0.69
Toluene	0.10 U	0.0027 J	0.10 U	0.10 U	0.0027 J
Trichloroethene	5.8	6.5	4.9	3.3	4.0
m&p-xylene	0.20 U	0.0025 J	0.20 U	0.20 U	0.0028 J
o-xylene	0.10 U	0.0050 U	0.10 U	0.10 U	0.0050 U

a/ Abbreviations: ppmv = parts per million by volume; U = Not detected at the reporting limit; J = Analyte detected at or below quantitation limit; NA = Not analyzed for; Centek = Centek Laboratories, LLC; Microseeps = Microseeps, Inc.
b/ Only compounds detected in one or more samples are included in this table.

Table 3
SVE Constant-Rate Test -
VOC Vapor Mass Removal Rate Estimates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Vapor Sample VOC Concentrations				Vapor VOC Mass Removal Rate Estimates		
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
SVE-1-031710	Acetone	0.40	6.0E-08	180	0.00065	0.016
	2-Butanone (MEK)	1.2	2.3E-07	180	0.0024	0.058
	Chloroform	0.043	1.3E-08	180	0.00014	0.0035
	cis-1,2-Dichloroethene	0.65	1.6E-07	180	0.0018	0.042
	trans-1,2-Dichloroethene	0.013	3.3E-09	180	0.000035	0.00085
	Methyl Isobutyl Ketone	0.0052	1.4E-09	180	0.000015	0.00035
	Tetrachloroethene	3.7	1.6E-06	180	0.017	0.41
	Tetrahydrofuran	2.5	4.7E-07	180	0.0051	0.12
	Toluene	0.0022	5.3E-10	180	0.0000057	0.00014
	Trichloroethene	6.7	2.3E-06	180	0.025	0.59
	m&p-xylene	0.0052	1.4E-09	180	0.000016	0.00037
	o-xylene	0.0016	4.4E-10	180	0.0000048	0.000115
				Subtotal =	***0.052***	***1.3***
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
SVE-2-031710	Chloroform	0.060	1.9E-08	158	0.00018	0.0042
	cis-1,2-Dichloroethene	0.55	1.4E-07	158	0.0013	0.031
	trans-1,2-Dichloroethene	0.015	3.9E-09	158	0.000037	0.00088
	Tetrachloroethene	2.80	1.2E-06	158	0.011	0.28
	Trichloroethene	7.65	2.6E-06	158	0.025	0.59
				Subtotal =	***0.038***	***0.91***

Table 3
SVE Constant-Rate Test -
VOC Vapor Mass Removal Rate Estimates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Vapor Sample VOC Concentrations				Soil Vapor VOC Mass Removal Rate Estimates		
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
SVE-3-031710	Chloroform	0.050	1.5E-08	159	0.00015	0.0035
	cis-1,2-Dichloroethene	0.49	1.2E-07	159	0.0012	0.028
	Tetrachloroethene	2.0	8.7E-07	159	0.0083	0.20
	Trichloroethene	5.8	2.0E-06	159	0.019	0.46
				Subtotal =	***0.029***	***0.69***
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
SVE-4A-031710	Acetone	0.85	1.3E-07	157	0.0012	0.029
	2-Butanone (MEK)	0.73	1.4E-07	157	0.0013	0.031
	Chloroform	0.029	9.0E-09	157	0.000085	0.0020
	cis-1,2-Dichloroethene	0.57	1.4E-07	157	0.0014	0.032
	trans-1,2-Dichloroethene	0.011	2.8E-09	157	0.000026	0.00063
	Methyl Isobutyl Ketone	0.0046	1.2E-09	157	0.000011	0.00027
	Tetrachloroethene	2.7	1.2E-06	157	0.011	0.26
	Tetrahydrofuran	1.6	3.0E-07	157	0.0028	0.068
	Toluene	0.0020	4.8E-10	157	0.0000045	0.00011
	Trichloroethene	4.2	1.4E-06	157	0.014	0.32
	m&p-xylene	0.0049	1.4E-09	157	0.000013	0.00031
	o-xylene	0.0016	4.4E-10	157	0.0000042	0.00010
				Subtotal =	***0.031***	***0.75***

Table 3
SVE Constant-Rate Test -
VOC Vapor Mass Removal Rate Estimates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Vapor Sample VOC Concentrations				Soil Vapor VOC Mass Removal Rate Estimates		
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
SVE-4B-031710	Chloroform	0.036	1.1E-08	157	0.00011	0.0025
	cis-1,2-Dichloroethene	0.38	9.5E-08	157	0.00090	0.022
	Tetrachloroethene	1.4	6.1E-07	157	0.0058	0.14
	Trichloroethene	4.0	1.4E-06	157	0.013	0.31
				Subtotal =	***0.020***	***0.47***
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
SVE-5-031810	Acetone	0.41	6.2E-08	157	0.00058	0.014
	2-Butanone (MEK)	0.64	1.2E-07	157	0.0011	0.027
	Chloroform	0.022	6.8E-09	157	0.000064	0.0015
	cis-1,2-Dichloroethene	0.48	1.2E-07	157	0.0011	0.027
	trans-1,2-Dichloroethene	0.0090	2.3E-09	157	0.000021	0.00051
	Methyl Isobutyl Ketone	0.0047	1.2E-09	157	0.000012	0.00028
	Tetrachloroethene	3.6	1.6E-06	157	0.015	0.35
	Tetrahydrofuran	1.3	2.4E-07	157	0.0023	0.055
	Toluene	0.0029	6.9E-10	157	0.0000065	0.00016
	Trichloroethene	5.5	1.9E-06	157	0.018	0.42
	m&p-xylene	0.0053	1.5E-09	157	0.000014	0.00033
	o-xylene	0.0018	5.0E-10	157	0.0000047	0.00011
				Subtotal =	***0.038***	***0.90***

Table 3
SVE Constant-Rate Test -
VOC Vapor Mass Removal Rate Estimates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

a/ Abbreviations: lb = pound; scf = standard cubic foot at STP; scfm = standard cubic foot per minute at STP; hr = hour; ppmv = parts per million by volume.
b/ VOC concentrations are assumed to be reported at standard temperature and pressure (STP)
c/ Molecular Weights:

Acetone =	58.1	Tetrachloroethene =	165.8
2-Butanone (MEK) =	72.1	Tetrahydrofuran =	72.1
Chloroform =	119.4	Toluene =	92.1
cis-1,2-Dichloroethene =	96.9	Trichloroethene =	131.4
trans-1,2-Dichloroethene =	96.9	m&p-xylene =	106.2
Methyl Isobutyl Ketone =	100.2	o-xylene =	106.2

Table 4
AS/SVE Constant-Rate Test -
VOC Vapor Mass Removal Rate Estimates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Vapor Sample VOC Concentrations				Vapor VOC Mass Removal Rate Estimates		
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
AS/SVE-1-031910	Chloroform	0.045	1.4E-08	157	0.00013	0.0031
	cis-1,2-Dichloroethene	0.52	1.3E-07	157	0.0012	0.029
	trans-1,2-Dichloroethene	0.011	2.7E-09	157	0.000025	0.00061
	Tetrachloroethene	2.9	1.2E-06	157	0.012	0.28
	Trichloroethene	5.8	2.0E-06	157	0.019	0.45
				Subtotal =	***0.032***	***0.76***
Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
AS/SVE-2-031910	Acetone	0.26	3.9E-08	156	0.0004	0.0088
	2-Butanone (MEK)	0.60	1.1E-07	156	0.0011	0.025
	Chloroform	0.027	8.4E-09	156	0.000078	0.0019
	Chloromethane	0.0054	7.1E-10	156	0.000007	0.00016
	cis-1,2-Dichloroethene	0.57	1.4E-07	156	0.0013	0.032
	trans-1,2-Dichloroethene	0.011	2.8E-09	156	0.000026	0.00062
	Methyl Isobutyl Ketone	0.0019	5.0E-10	156	0.000005	0.00011
	Tetrachloroethene	4.3	1.9E-06	156	0.017	0.42
	Tetrahydrofuran	0.67	1.3E-07	156	0.0012	0.028
	Toluene	0.0027	6.5E-10	156	0.0000061	0.00015
	Trichloroethene	6.5	2.2E-06	156	0.021	0.50
	m&p-xylene	0.0025	6.9E-10	156	0.000006	0.00016
				Subtotal =	***0.042***	***1.01***

Table 4
AS/SVE Constant-Rate Test -
VOC Vapor Mass Removal Rate Estimates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
AS/SVE-3-031910	Chloroform	0.032	9.9E-09	154	0.00009	0.0022
	cis-1,2-Dichloroethene	0.47	1.2E-07	154	0.0011	0.027
	Tetrachloroethene	2.5	1.1E-06	154	0.010	0.24
	Trichloroethene	4.9	1.7E-06	154	0.015	0.37
				Subtotal =	***0.027***	***0.64***

Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
AS/SVE-4-032010	Chloroform	0.023	7.1E-09	156	0.00007	0.0016
	cis-1,2-Dichloroethene	0.35	8.8E-08	156	0.0008	0.020
	Tetrachloroethene	1.3	5.5E-07	156	0.005	0.12
	Trichloroethene	3.3	1.1E-06	156	0.011	0.25
				Subtotal =	***0.017***	***0.40***

Table 4
AS/SVE Constant-Rate Test -
VOC Vapor Mass Removal Rate Estimates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Sample ID	Detected VOCs	VOC Concentrations (ppmv) (b)	VOC Concentrations (lbs/scf)	Flow Rate at Time of Sample (scfm)	VOC Emission Rate (lb/hr)	VOC Emission Rate (lb/day)
AS/SVE-5-032010	Acetone	0.16	2.4E-08	156	0.00023	0.0054
	2-Butanone (MEK)	0.35	6.6E-08	156	0.0006	0.015
	Chloroform	0.014	4.3E-09	156	0.000041	0.0010
	cis-1,2-Dichloroethene	0.38	9.6E-08	156	0.0009	0.022
	trans-1,2-Dichloroethene	0.0063	1.6E-09	156	0.000015	0.00036
	Heptane	0.0012	3.1E-10	156	0.000003	0.000070
	Methyl Isobutyl Ketone	0.0020	5.2E-10	156	0.000005	0.00012
	Isopropyl Alcohol	0.0079	1.2E-09	156	0.000012	0.00028
	Tetrachloroethene	2.6	1.1E-06	156	0.010	0.25
	Tetrahydrofuran	0.7	1.3E-07	156	0.0012	0.029
	Toluene	0.0027	6.5E-10	156	0.0000061	0.00015
	Trichloroethene	4.0	1.4E-06	156	0.013	0.31
	m&p-xylene	0.0028	7.7E-10	156	0.000007	0.00017
				Subtotal =	***0.026***	***0.63***

a/ Abbreviations: lb = pound; scf = standard cubic foot at STP; scfm = standard cubic foot per minute at STP; hr = hour; ppmv = parts per million by volume.

b/ VOC concentrations are assumed to be reported at standard temperature and pressure (STP)

c/ Molecular Weights:

Acetone =	58.1	Isopropyl Alcohol =	60.1
2-Butanone (MEK) =	72.1	Tetrachloroethene =	165.8
Chloroform =	119.4	Tetrahydrofuran =	72.1
Chloromethane =	50.5	Toluene =	92.1
cis-1,2-Dichloroethene =	96.9	Trichloroethene =	131.4
trans-1,2-Dichloroethene =	96.9	m&p-xylene =	106.2
Heptane =	100.2	o-xylene =	106.2
Methyl Isobutyl Ketone =	100.2		

Table 5
Baseline and Post-Test Groundwater Sample Results
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

Sample ID:	**MP-1**			**MP-2**		
Sample Date:	3/14/2010	3/20/2010		3/14/2010	3/20/2010	
Sample Time:	1713	1550		1742	1551	
VOCs (µg/l)	**Baseline**	**Post-Test**	**Percent Change**	**Baseline**	**Post-Test**	**Percent Change**
cis-1,2-Dichloroethene	35	53	34	755 D	887 D	15
trans-1,2-Dichloroethene	1.0 U	1.0 U	0	5.3	6.8	22
Tetrachloroethene	362	581	38	1,810 D	1,670 D	-8
Trichloroethene	496	827	40	2,090 D	2,250 D	7
Total VOCs (µg/l)	894	1,462	39	4,660	4,814	3

Sample ID:	**MP-3**			**MP-4**		
Sample Date:	3/14/2010	3/20/2010		3/14/2010	3/20/2010	
Sample Time:	1808	1547		1840	1633	
VOCs (µg/l)	**Baseline**	**Post-Test**	**Percent Change**	**Baseline**	**Post-Test**	**Percent Change**
cis-1,2-Dichloroethene	626 D	597 D	-5	133	168	21
trans-1,2-Dichloroethene	3.4	3.2	-6	1.0 U	1.2	17
Tetrachloroethene	2,270 D	1,680 D	-35	204	243	16
Trichloroethene	218	264	17	112	131	15
Total VOCs	3,117	2,544	-23	450	543	17

a/ Abbreviations: U = Not detected at the reporting limit; D = concentration is from a secondary dilution analysis;
l = liter; µg =micrograms.

Exhibits

Exhibit 1
24-Hour Background Water Level Measurements
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

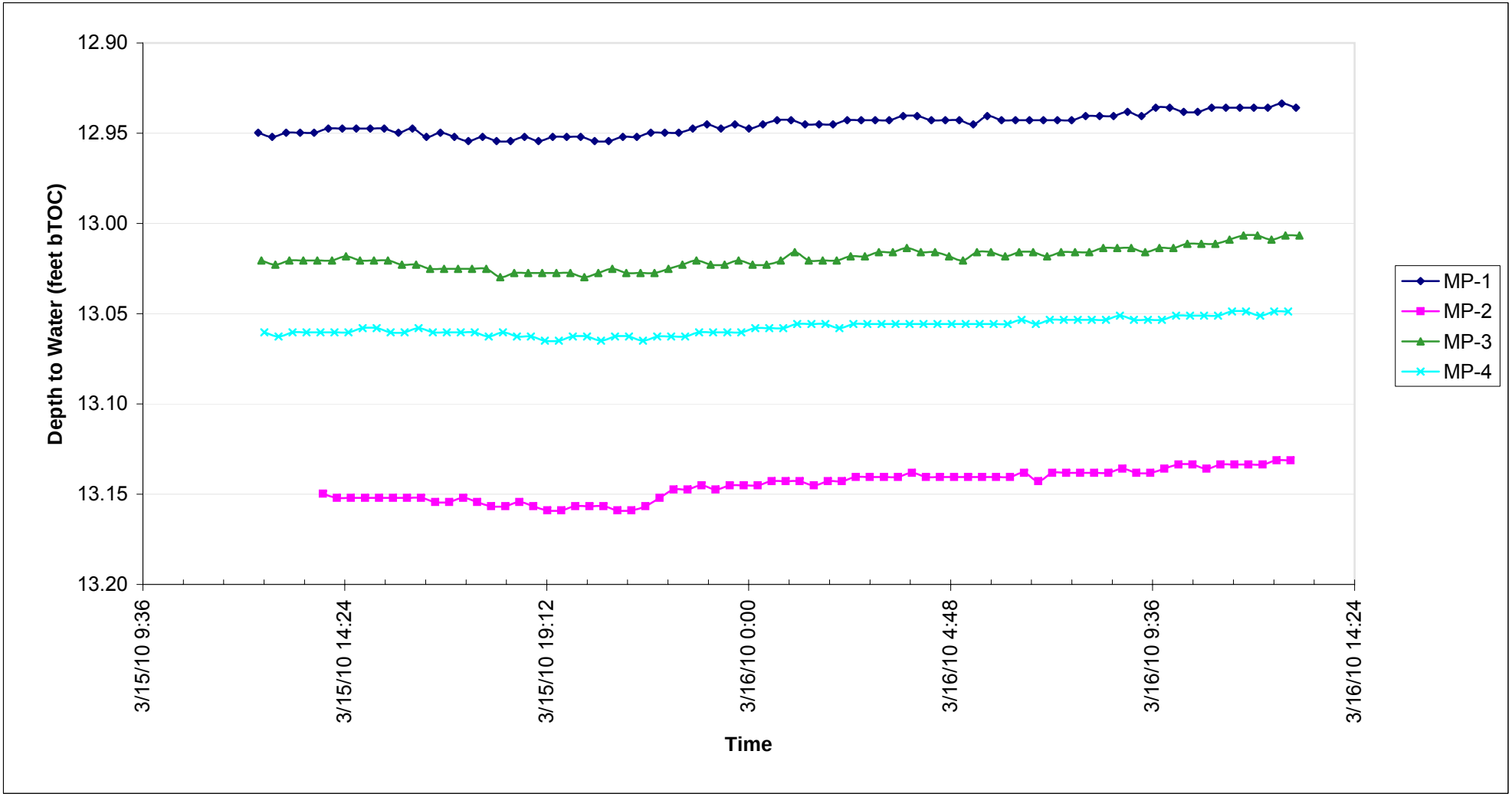


Exhibit 2
SVE Stepped-Rate Test - Applied Vacuum-Flow Response Curve
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

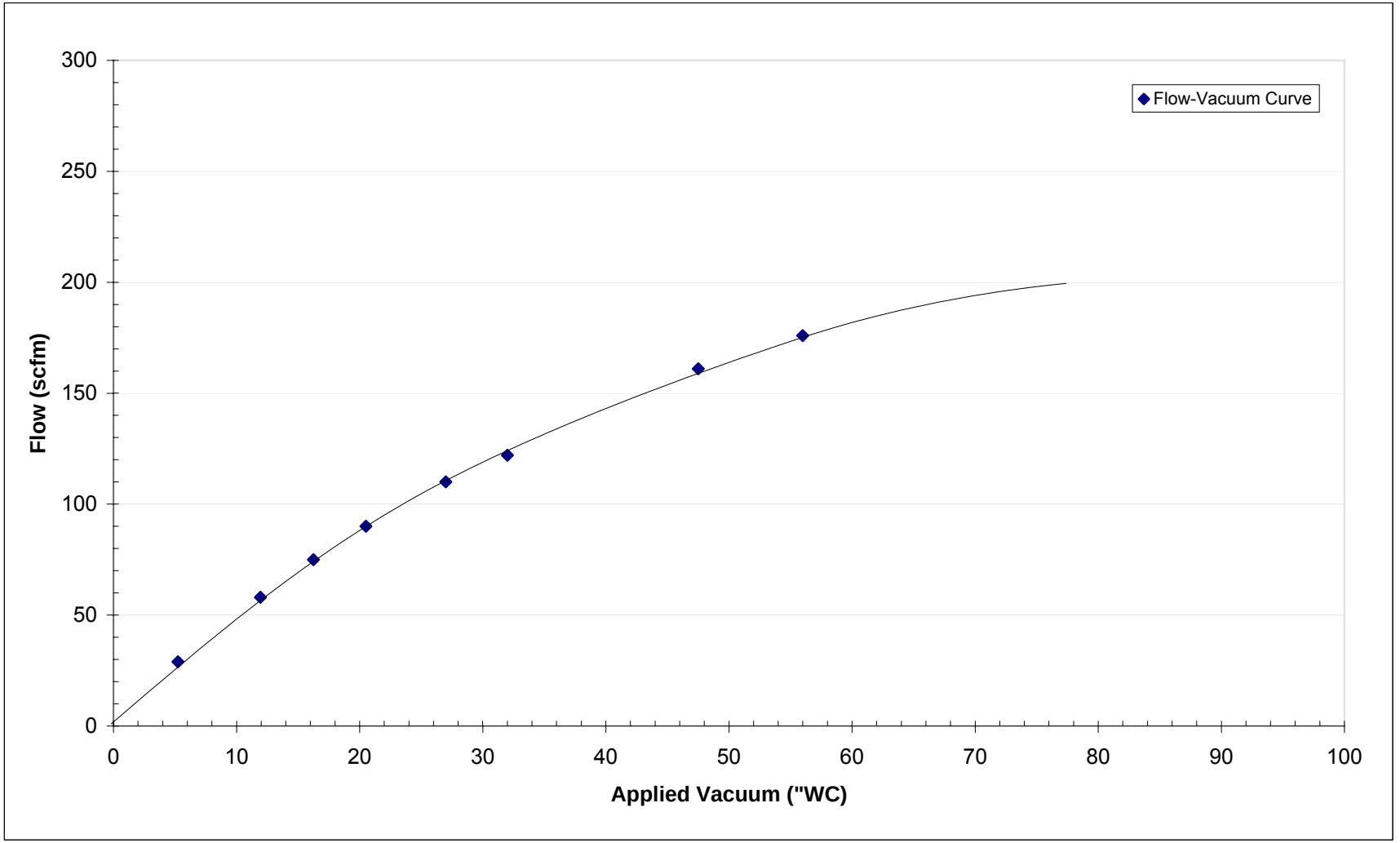
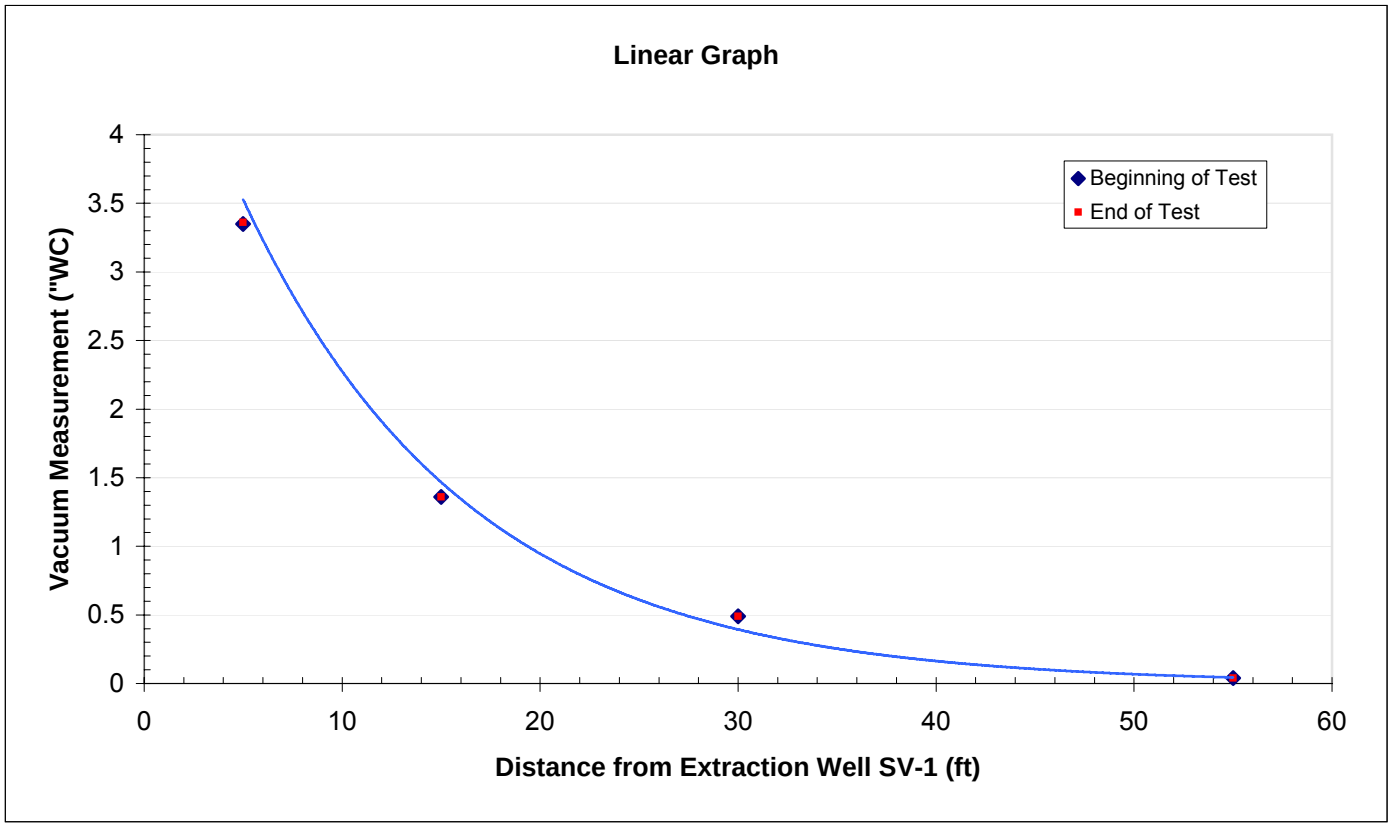


Exhibit 3
SVE Constant-Rate Test - Vacuum ROI
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York



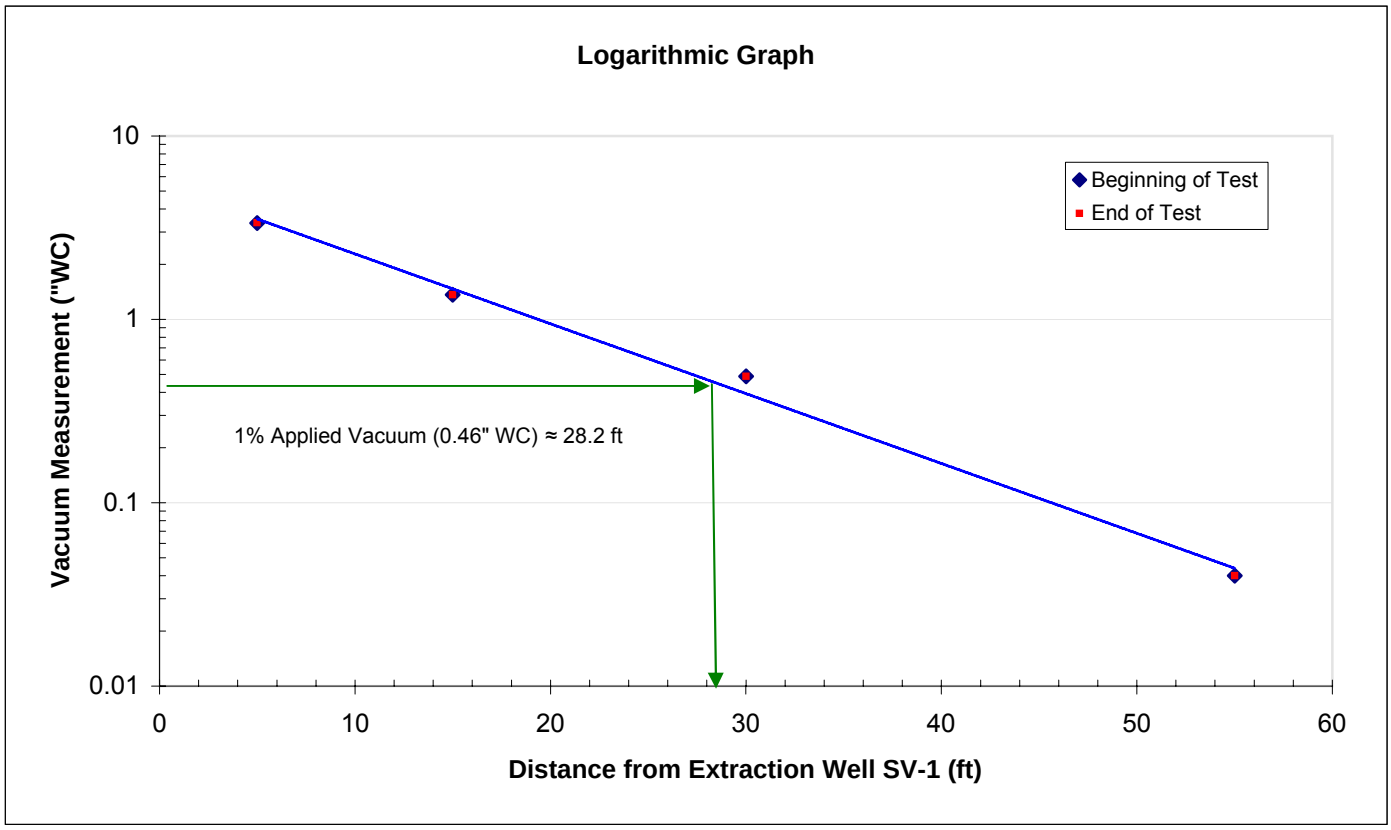


Exhibit 4
SVE Tests - Groundwater Elevation Trends
Former Huck Manufacturing Facility
Kingston, New York

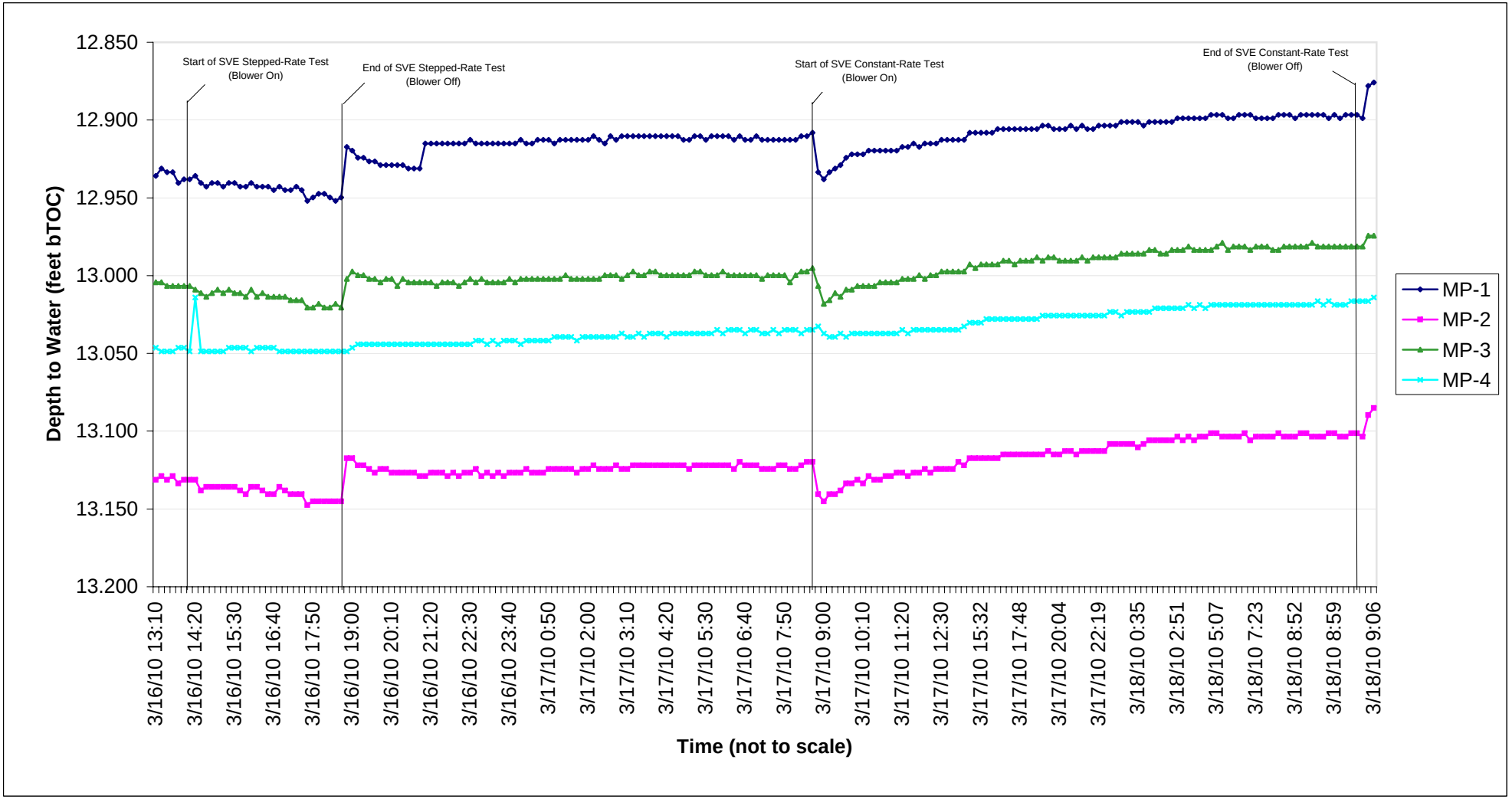


Exhibit 5
SVE Constant-Rate Test - Mass Removal Rates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

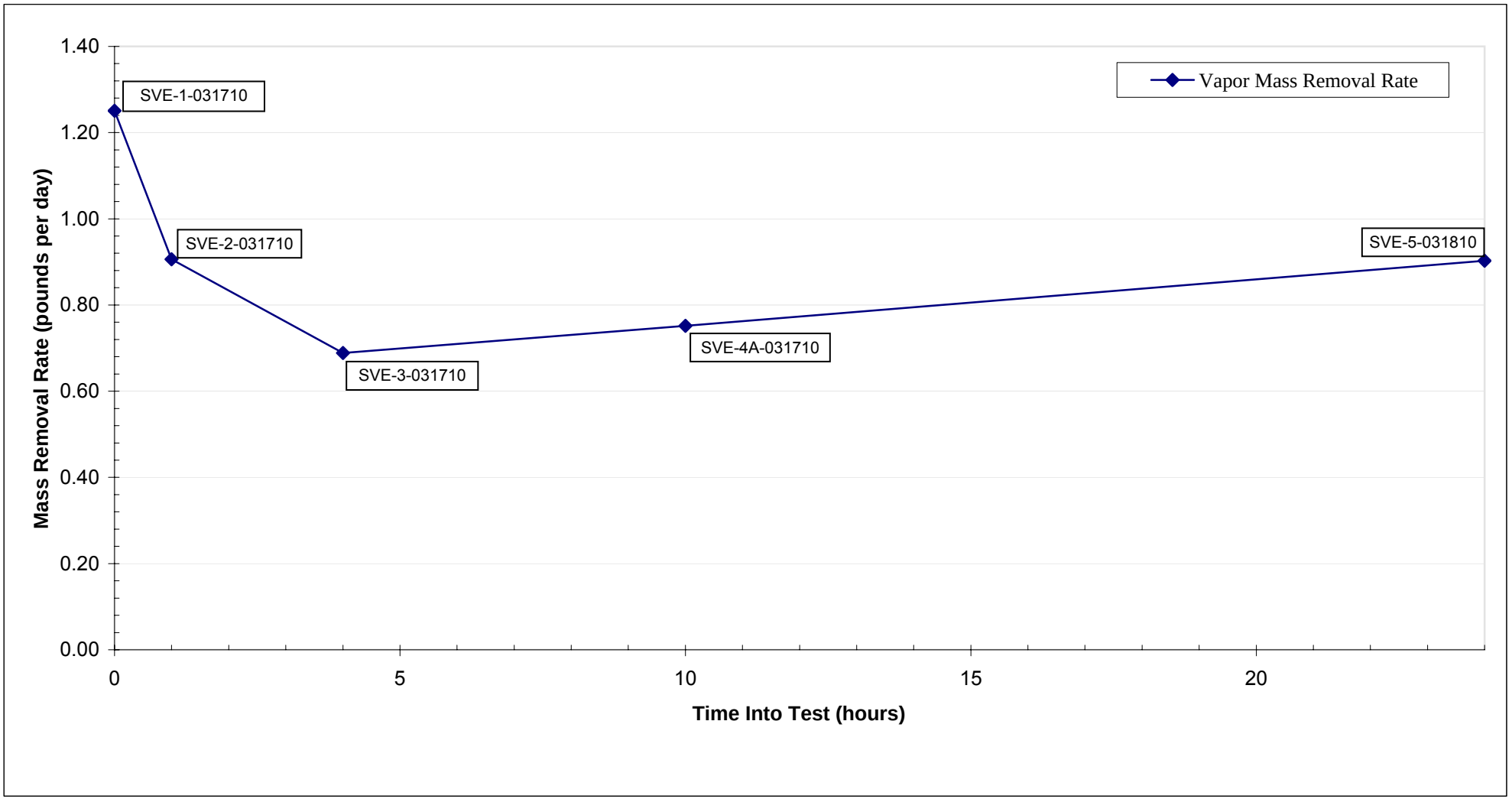


Exhibit 6
AS Constant-Rate Test - Pressure ROI
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

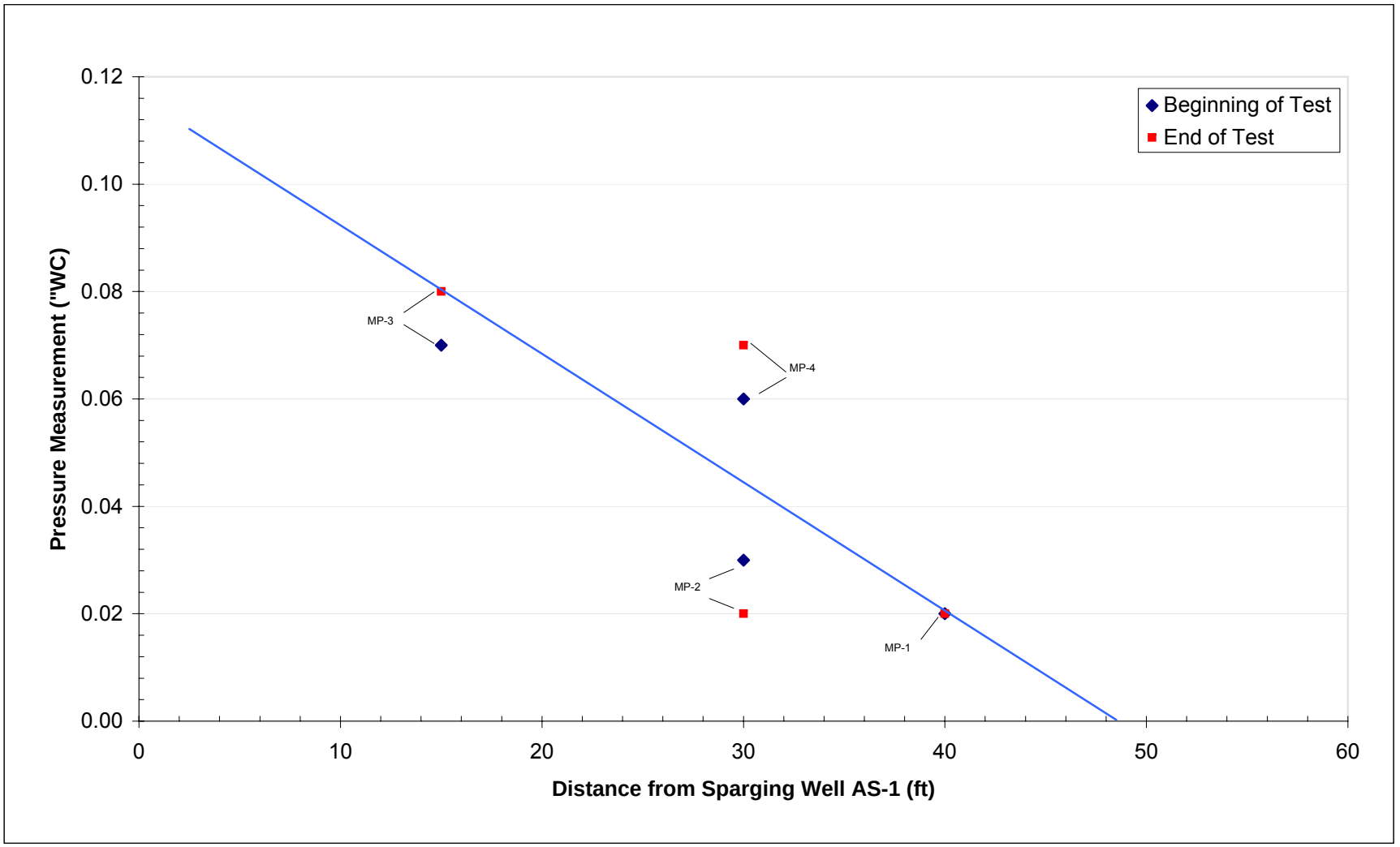


Exhibit 7
AS Tests - Groundwater Elevation Trends
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

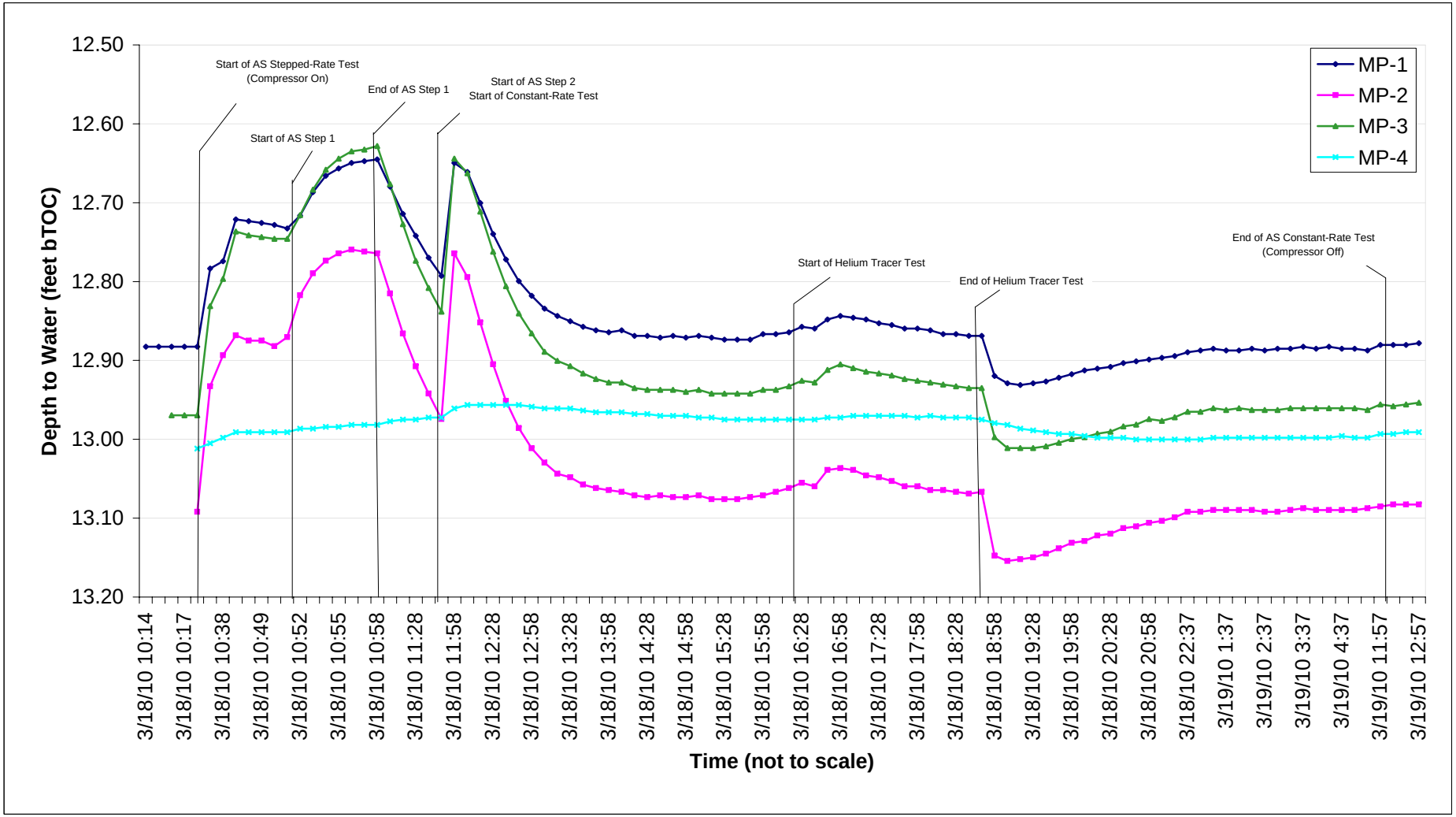


Exhibit 8
Dissolved Oxygen Trends
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

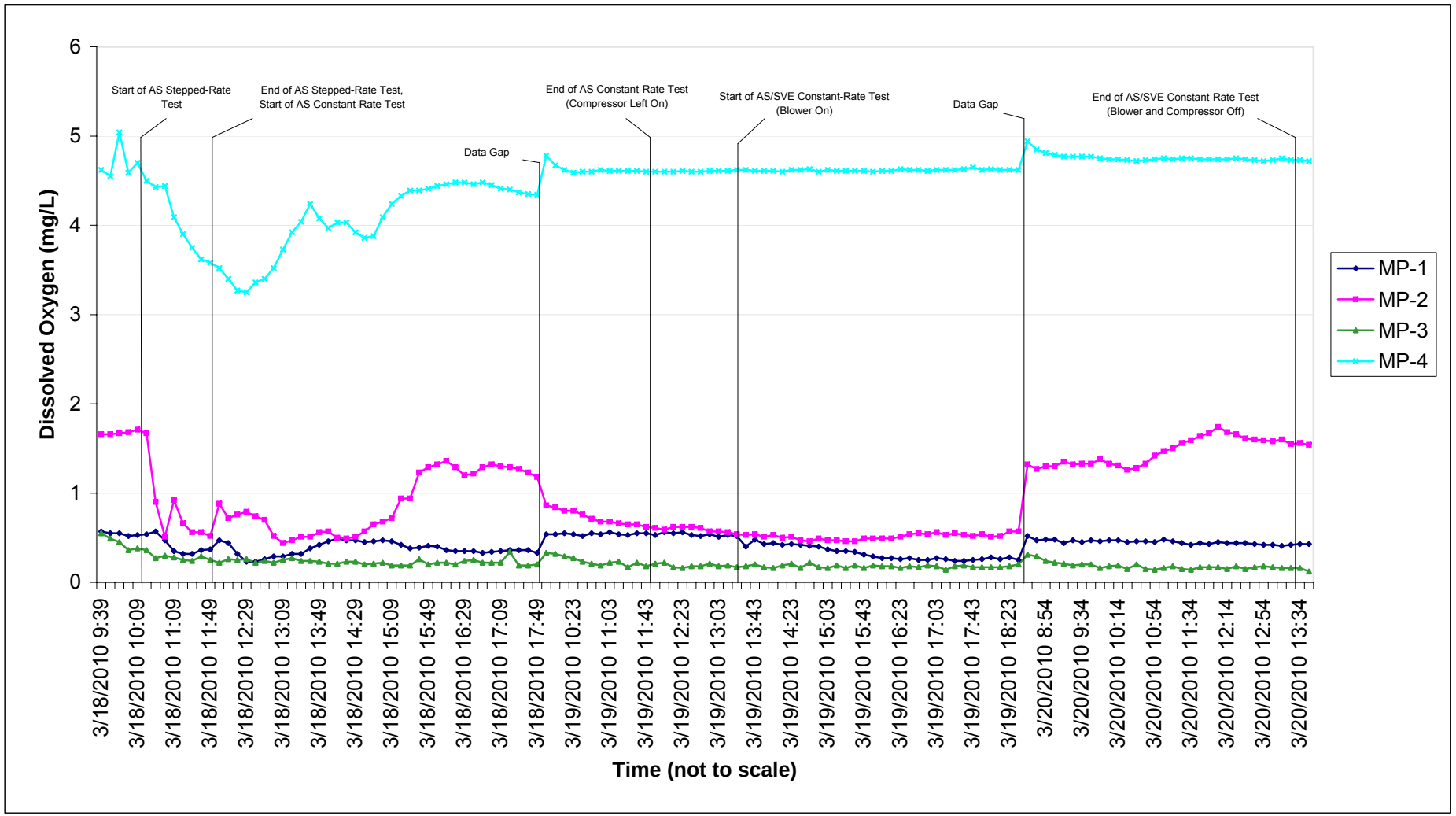
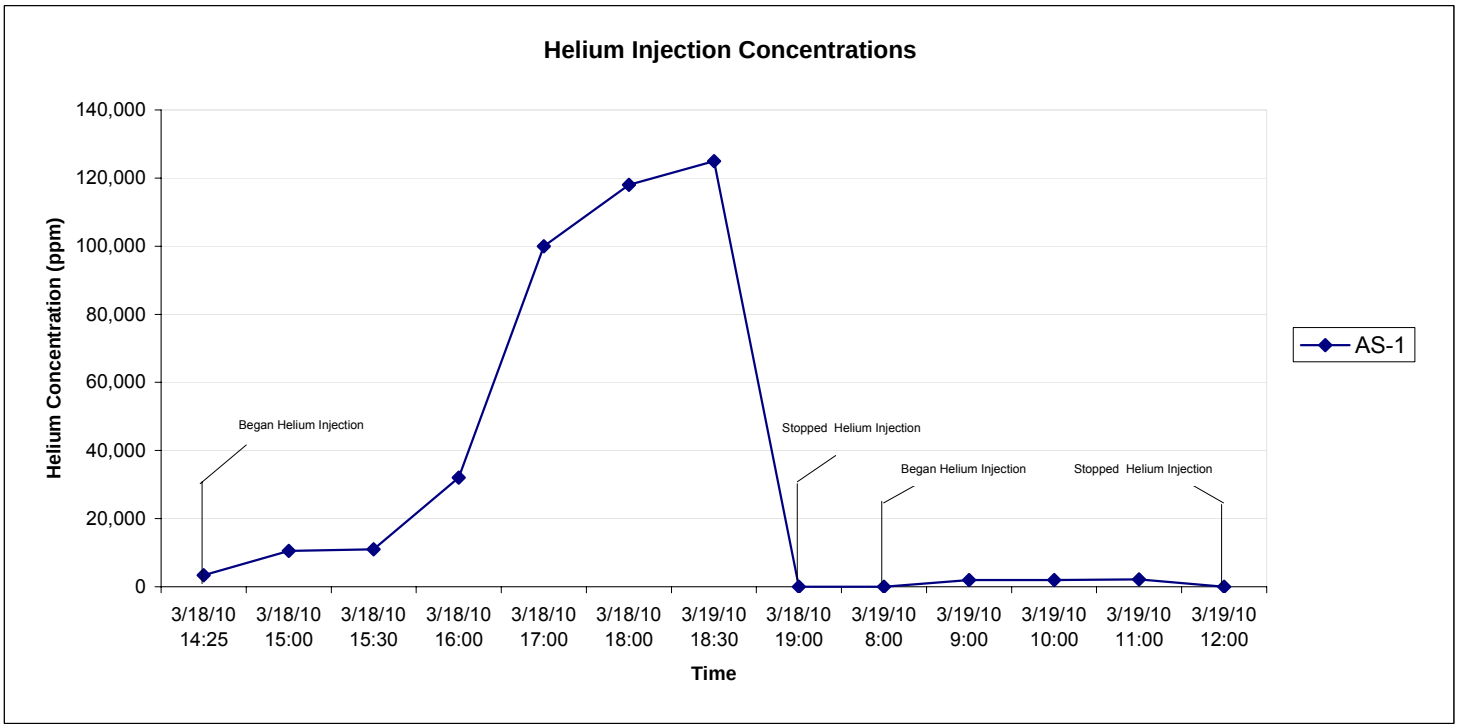


Exhibit 9
AS Constant-Rate Test - Helium Tracer Test
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York



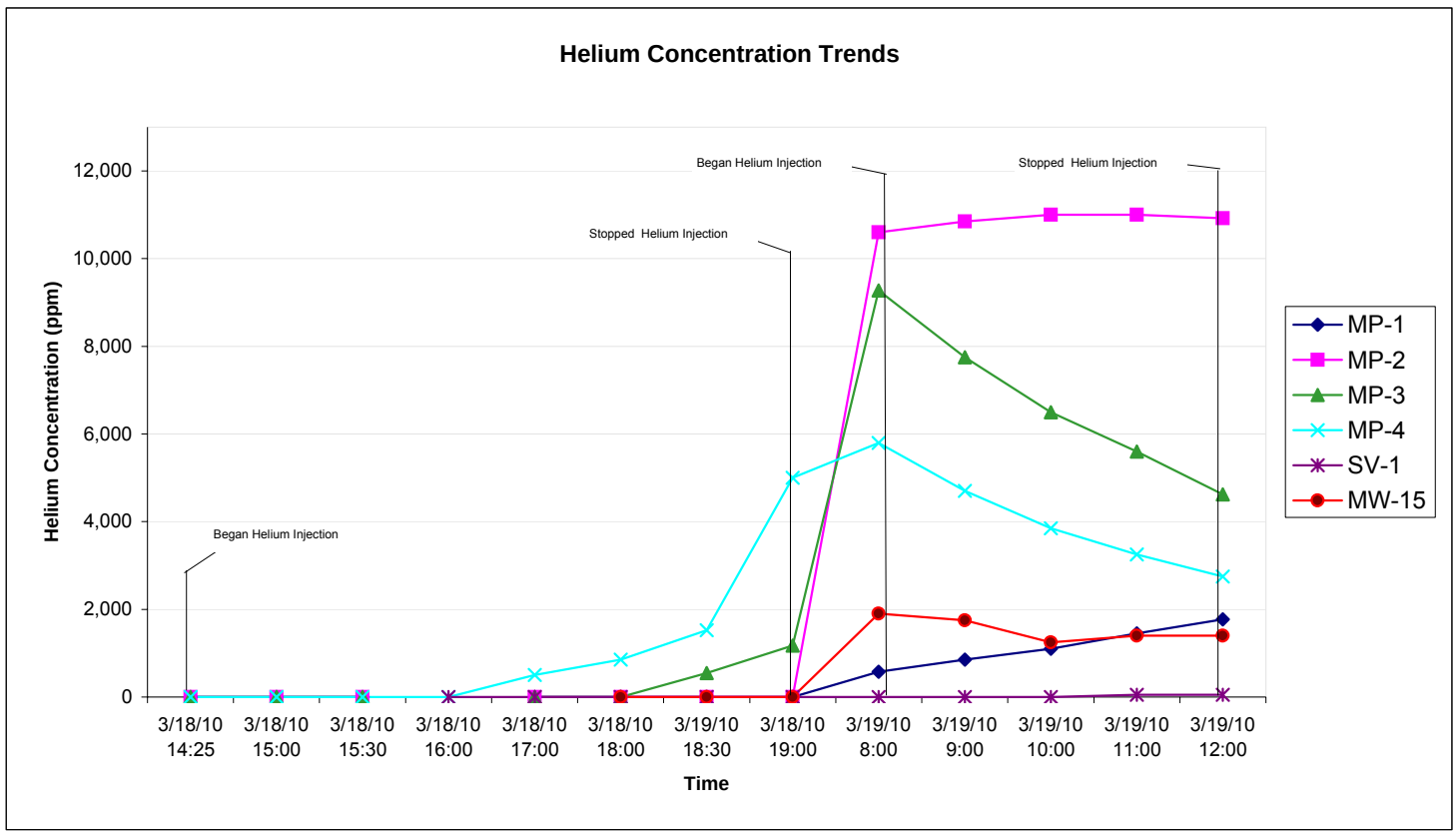


Exhibit 10
AS/SVE Constant-Rate Test - Mass Removal Rates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

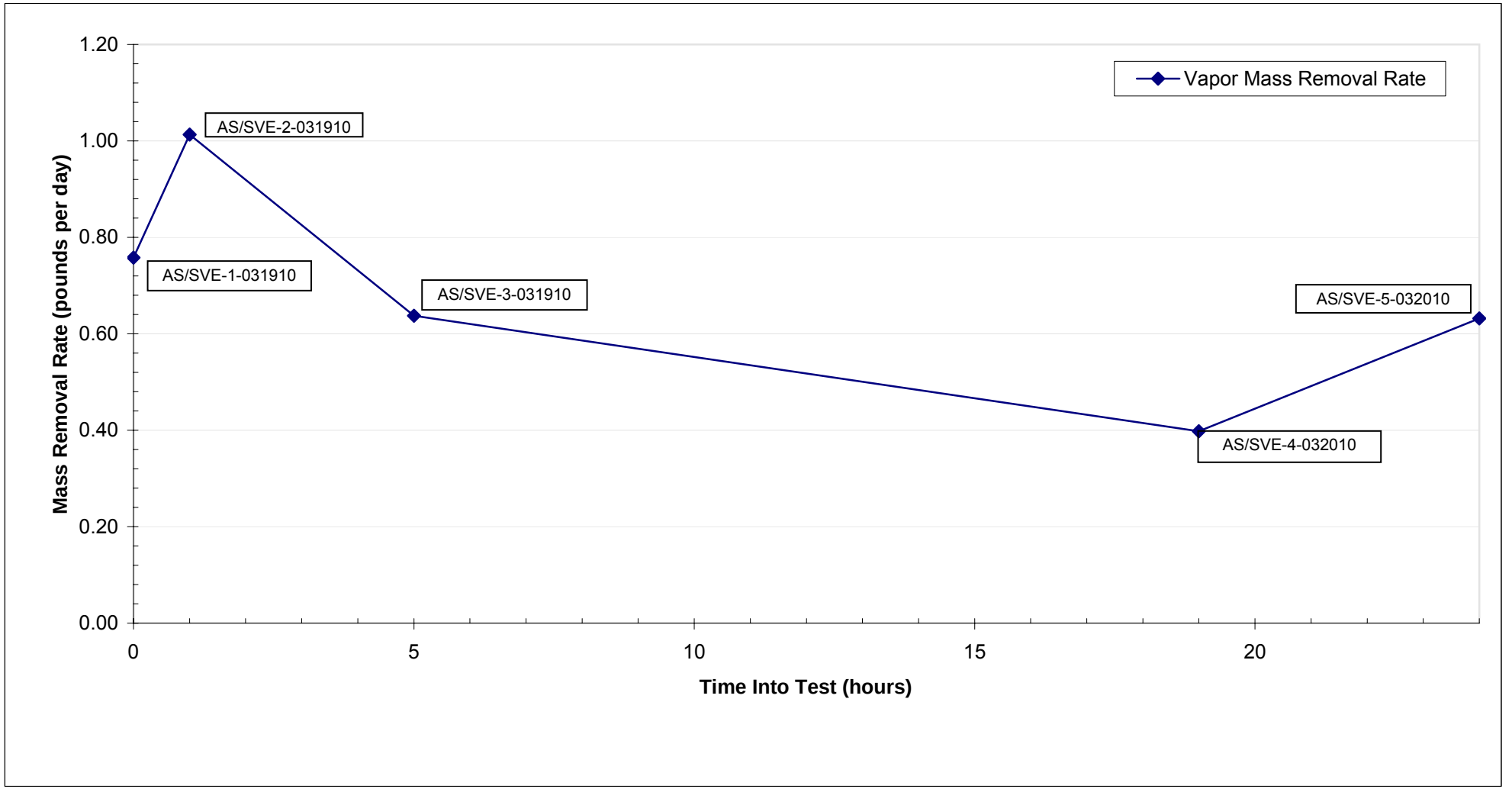


Exhibit 11
Mass Removal Rates
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

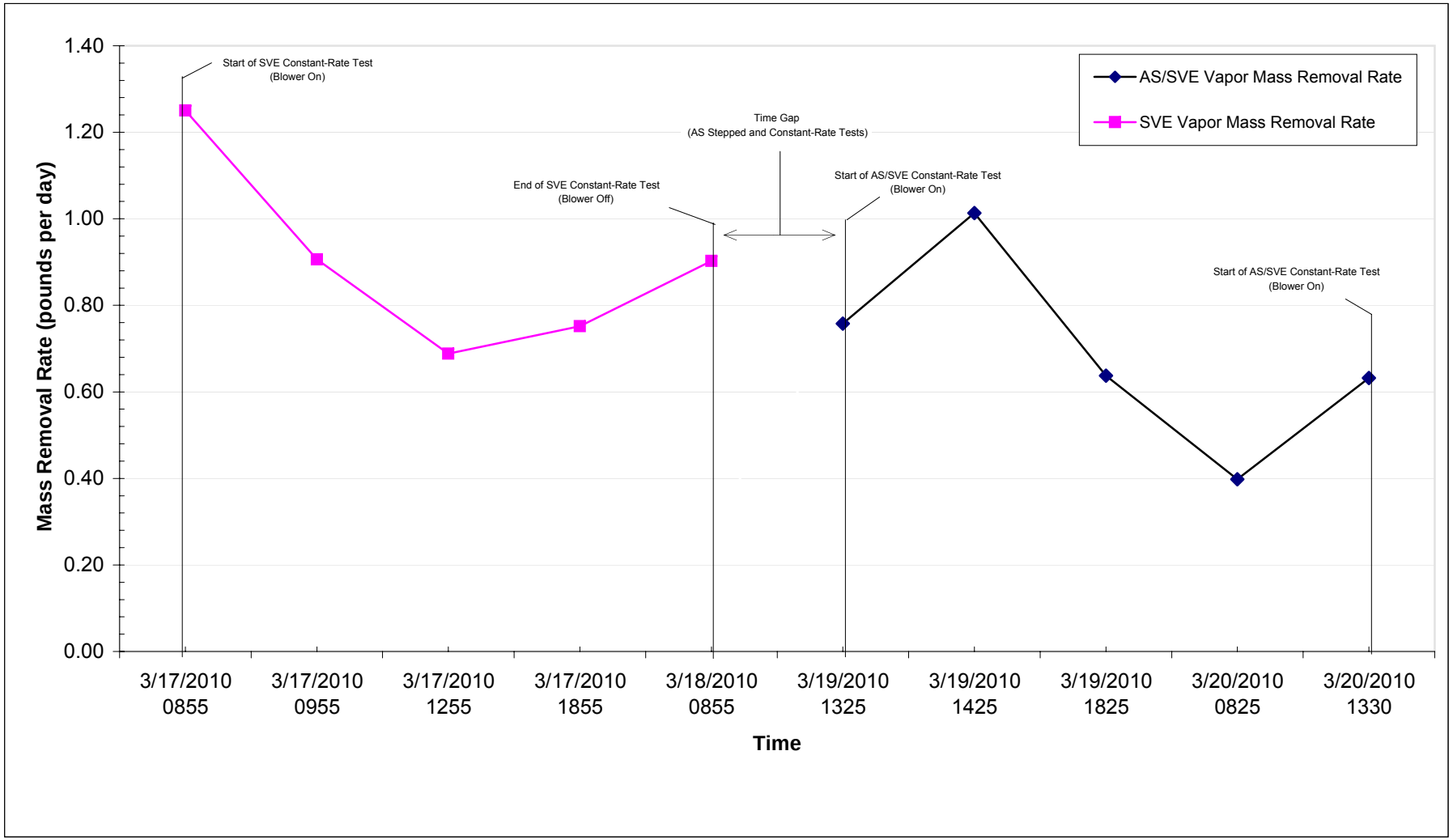
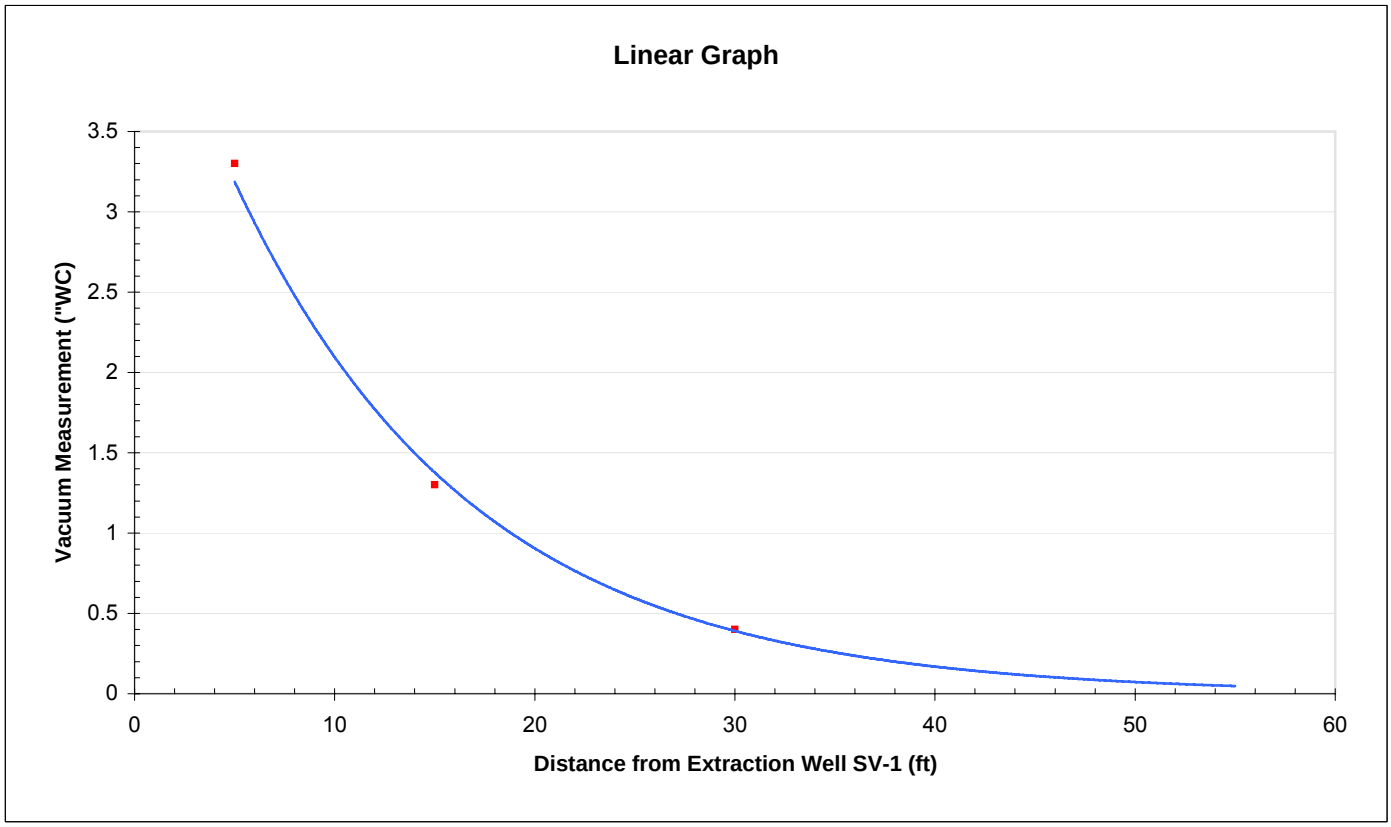


Exhibit 12
AS/SVE Constant-Rate Test - Vacuum ROI
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York



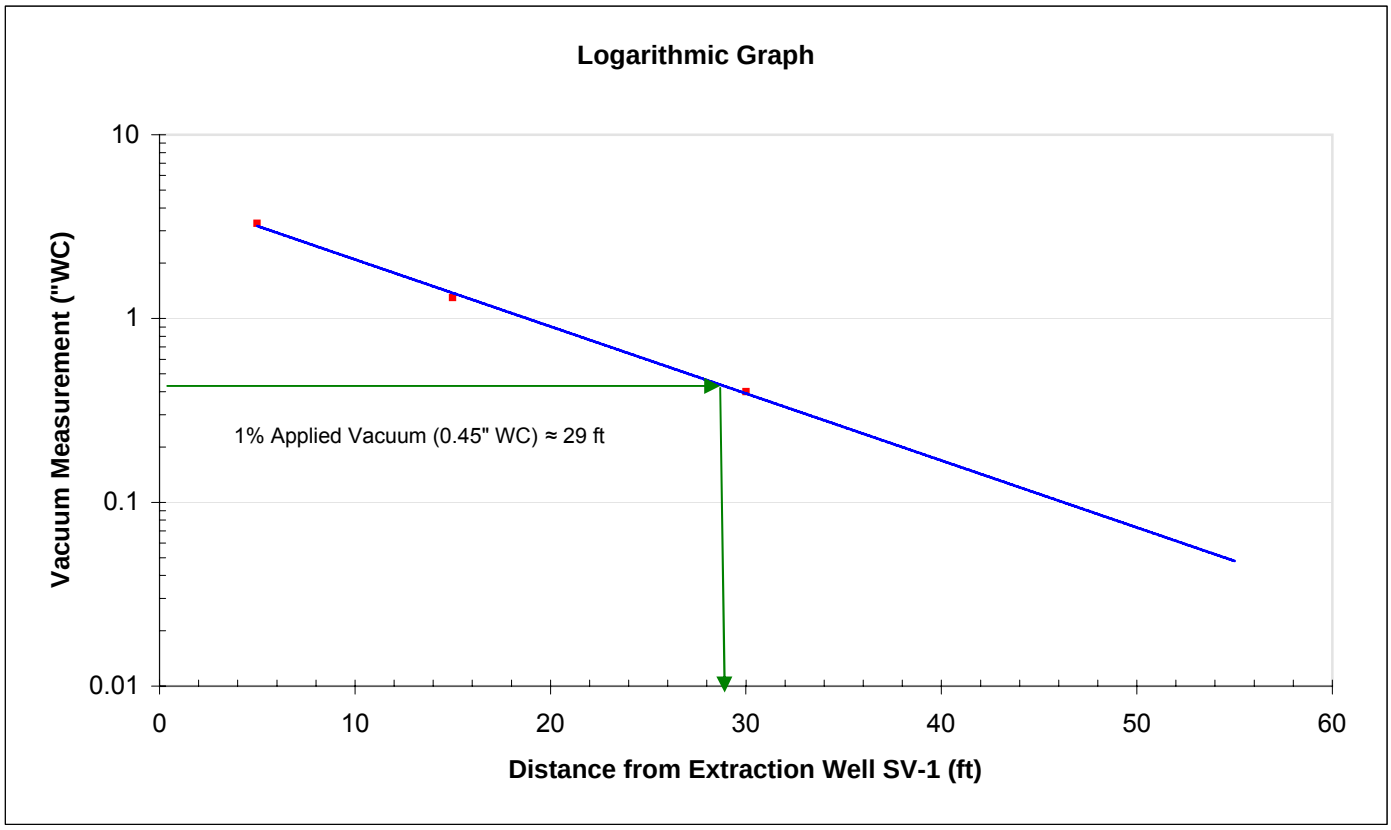
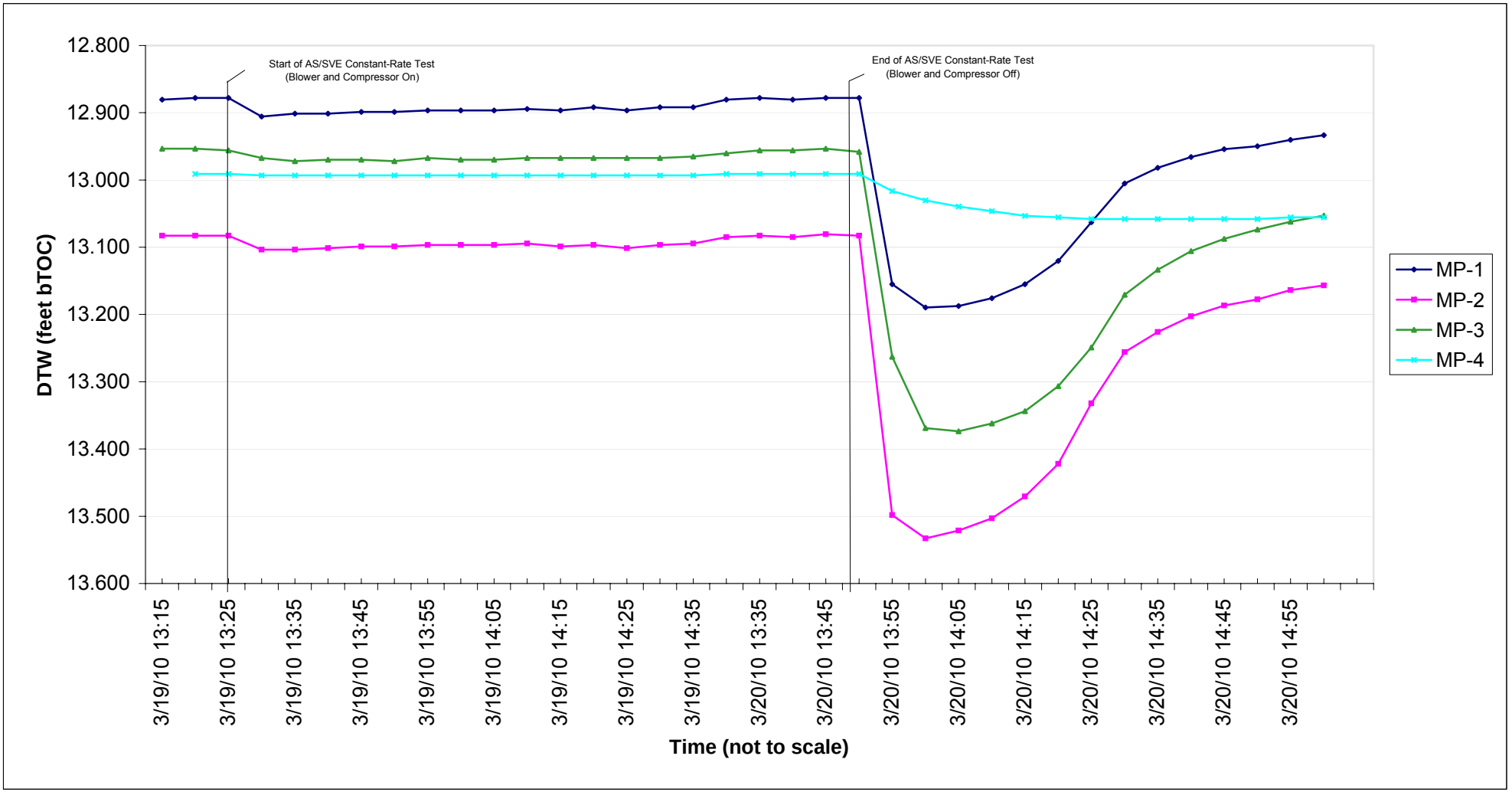


Exhibit 13
AS/SVE Constant-Rate Test - Groundwater Elevation Trends
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York



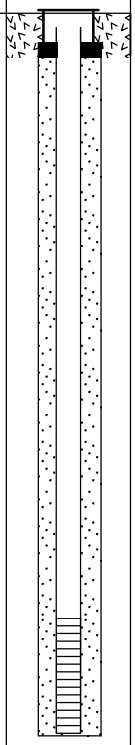
Appendix A – Test Well Boring Logs and Construction Diagrams

Boring Log: AS-1

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: January 27, 2010

Surface Elevation (feet AMSL*): Not Determir
TOC Elevation (feet AMSL*):
Total Depth (feet): 25
Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
10							
20							
30							
40							

Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Ian Grassey
Method: Direct Push

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

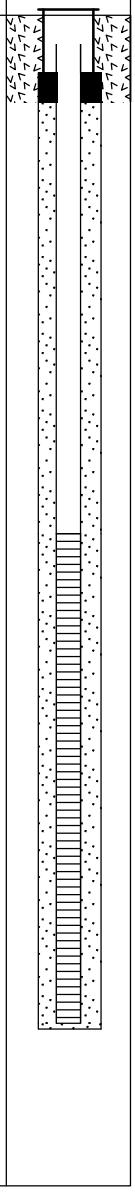
Boring Log: MP-1

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: January 26, 2010

Surface Elevation (feet AMSL*): Not Determir
TOC Elevation (feet AMSL*):
Total Depth (feet): 17
Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	



Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Ian Grassey
Method: Direct Push

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

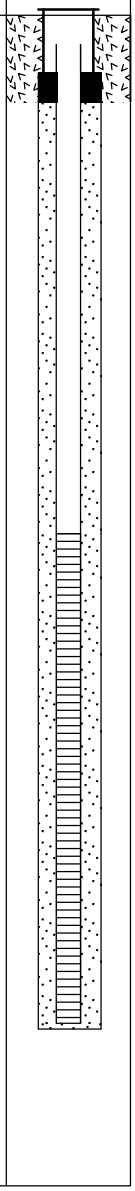
Boring Log: MP-2

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: January 27, 2010

Surface Elevation (feet AMSL*): Not Determir
TOC Elevation (feet AMSL*):
Total Depth (feet): 17
Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	



Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Ian Grassey
Method: Direct Push

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

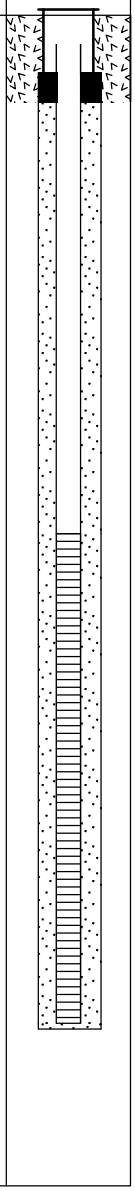
Boring Log: MP-3

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: January 27, 2010

Surface Elevation (feet AMSL*): Not Determir
TOC Elevation (feet AMSL*):
Total Depth (feet): 17
Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	



Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Ian Grassey
Method: Direct Push

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

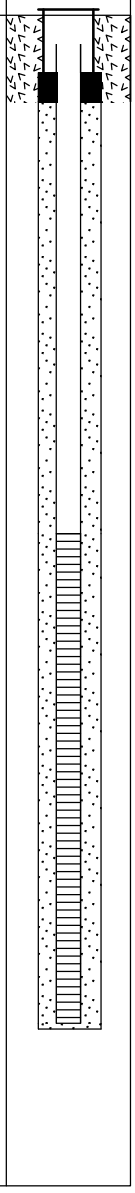
Boring Log: MP-4

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: January 27, 2010

Surface Elevation (feet AMSL*): Not Determir
TOC Elevation (feet AMSL*):
Total Depth (feet): 17
Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	



Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Ian Grassey
Method: Direct Push

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

Boring Log: MW-14

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: July 10, 2008

Surface Elevation (feet AMSL*): 184.82
TOC Elevation (feet AMSL*): 184.57
Total Depth (feet): 24
Borehole Diameter (inches): 8.25

*AMSL = Above mean sea level

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
						Concrete	
2	1	5.1	- - -	100		***Poorly-Graded Gravel with Sand (GP)*** Black (10YR 2/1) gravel, some fine to coarse-grained sand, trace silt, trace organics, trace to little brick fragments; loose; dry.	
4	2	38.9	- - -	100		***Poorly-Graded Sand (SP)*** Dark yellowish-brown (10YR 3/6) fine to medium-grained sand, trace silt; loose to medium dense; dry.	
6	3	88.9	- - -	100		***Poorly-Graded Sand (SP)*** Dark brown (10YR 3/3) fine to medium-grained sand; loose; dry, becoming moist between 11 and 14.5 feet, becoming wet between 14.5 and 15 feet.	
10	4	87.6	- - -	100			
12	5	80.2	- - -	100			
16	6	62.4	- - -	100		***Poorly-Graded Sand (SP)*** Very dark grayish-brown (10YR 3/2) fine to medium-grained sand, trace coarse-grained sand and gravel; medium dense; wet.	
18	7	70.7	- -	100		***Poorly-Graded Sand with Silt (SP-SM)*** Dark yellowish-brown (10YR 3/4) fine-grained sand, trace to little silt; medium dense; moist to wet.	
20							

Geologist(s): Erik S. Reinert
Subcontractor: Aquifer Drilling and Testing, Inc.
Driller/Operator: Mike Sarro
Method: Hollow Stem Auger

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

Boring Log: MW-14

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: July 10, 2008

Surface Elevation (feet AMSL*): 184.82
TOC Elevation (feet AMSL*): 184.57
Total Depth (feet): 24
Borehole Diameter (inches): 8.25

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
22	8	NA	- - -	100		***Poorly-Graded Sand (SP)*** Dark yellowish-brown (10YR 4/4) fine to medium-grained sand, trace coarse-grained sand and gravel; dense, becoming loose between 21 and 24 feet; wet. *(continued)*	
24						Bottom of Boring at 24 feet Lithology logged from soil boring installed adjacent to monitoring well location.	
26							
28							
30							
32							
34							
36							
38							
40							

Geologist(s): Erik S. Reinert
Subcontractor: Aquifer Drilling and Testing, Inc.
Driller/Operator: Mike Sarro
Method: Hollow Stem Auger

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

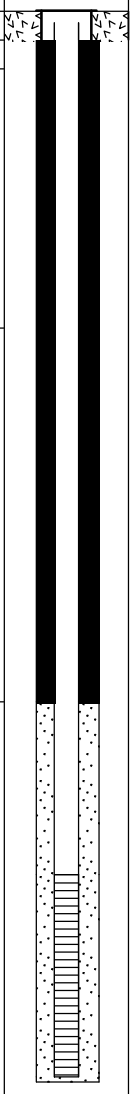
Boring Log: MW-15

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: July 10, 2008

Surface Elevation (feet AMSL*): 184.77
TOC Elevation (feet AMSL*): 184.49
Total Depth (feet): 18.5
Borehole Diameter (inches): 2.25

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	
						Concrete	
2	1	0.0	- - -	100		***Poorly-Graded Sand (SP)*** Very dark gray (10YR 3/1) gravel, some fine to coarse-grained sand, trace silt, trace organics and cinders; loose; dry.	
4	2	0.0	- - -	100		***Poorly-Graded Sand (SP)*** Dark yellowish-brown (10YR 4/6) fine to medium-grained sand; loose; dry.	
6	3	0.0	- - -	100		***Poorly-Graded Sand (SP)*** Dark yellowish-brown (10YR 3/2) fine to coarse-grained sand; loose; dry	
8							
10	4	0.0	- - -	100			
12							
14							
16							
18							
20						Bottom of Boring at 18.5 feet	



Geologist(s): Erik S. Reinert
Subcontractor: Aquifer Drilling and Testing, Inc.
Driller/Operator: Tom Hutchinson
Method: Direct Push

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

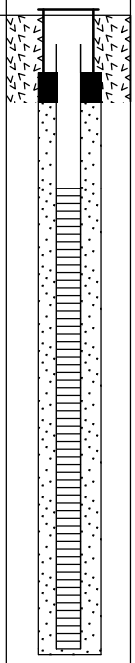
Boring Log: SV-1

Project: Former Huck Manufacturing
Project No.: 138008
Location: Kingston, New York
Completion Date: January 27, 2010

Surface Elevation (feet AMSL*): Not Determir
TOC Elevation (feet AMSL*):
Total Depth (feet): 11
Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile		
Depth	Sample/Interval	PID/OVM (ppm)	Blow Count	% Recovery	Lithology	Description	Well Details
						Ground Surface	



Geologist(s): Erik S. Reinert
Subcontractor: Parratt Wolff, Inc.
Driller/Operator: Ian Grassey
Method: Direct Push

WSP Environment & Energy
5 Sullivan Street
Cazenovia, New York 13035
(315) 655-3900

Appendix B – Vapor Sample Analytical Report

CENTEK LABORATORIES, LLC

148 Midler Park Drive * Syracuse, NY 13206

Phone (315) 491-9730 * Emergency 24/7 (315) 416-2752

www.CentekLabs.com

Analytical Report

NYSDOH ELAP
Certificate No. 11830

Dave Bouchard
WSP Environment and Energy
5 Sullivan Street
Cazenovia, NY 13035

TEL: (315) 655-3900
FAX: (315) 655-3907

Tuesday, March 30, 2010
Order No.: C1003049

RE: Kingston ,NY

Dear Dave Bouchard:

Centek Laboratories, LLC received 5 sample(s) on 3/23/2010 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service.

Please contact your client service representative at (315) 431-9730, if you would like any additional information regarding this report.

Thank you for using Centek Laboratories. This report can not be reproduced except in its entirety, without prior written authorization.

Sincerely,

Russell J. Pellegrino
Technical Director

Centek Laboratories

Date: *11-Apr-10*

CLIENT: WSP Environment and Energy

Project: -Kingston ,NY

Lab Order: C1003049

CASE NARRATIVE

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

CHAIN OF CUSTODY RECORD

Project Number:	Site and Location:
138008.20	Federal Mogul - Kingston, NY
Contact Name: Scott Petersen	**Contact Email:** Scott.petersen@wspgroup.com
Sampler's Name: Scott Petersen	**Sampler's Signature:**

Matrices: S = Soil; Aq = Water; A = Air; Bu = Bulk; W = Wipe; Bi = Biota; OW = Oily Waste; O = Other

Nº 01067

Sample Identification:	Depth	Date	Time	Matrix	Number of Containers	* TO-15 (VOCs) w/TPH	Cert #	Remarks
SVE-1-031710	—	3/17/10	0854	A	1	X	11	* Reported like WSP - Schofield, WI site with TO-15 (VOCs) and Total Percent Hydrocarbon noted at the bottom of the report
SVE-4A-031710	—	3/17/10	1855	A	1	X	77	
SVE-5-031810	—	3/18/10	0855	A	1	X	74	
AS/SVE-2-031910	—	3/19/10	1425	A	1	X	25	
AS/SVE-5-032010	—	3/20/10	1325	A	1	X	18	

3/22/10

3/22/10

C100.3049

Relinquished by (Signature):	3/22/10 1540 Date | Time	Received by (Signature):	Laboratory Name: Centek
Relinquished by (Signature):	3/22/10 Date | Time	Received by (Signature):	Laboratory Location: Syracuse, NY
Turn-Around Time: Standard		Tracking Number:	Custody Seal Numbers:
			Method of Shipment: FedEx

WSP Environment & Energy

- ☐ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500
- ☐ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040
- ☐ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100
- ☐ New Jersey Office: 334 Elizabeth Ave., Somerset, NJ 08873 / Tel: 732-564-0888
- ☐ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200
- ☐ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510
- ☐ Boxborough Office: 1740 Massachusetts Ave., Boxborough, MA 01719 / Tel: 978-635-9600
- ☒ Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900

Centek Laboratories, LLC

Date: *11-Apr-10*

CLIENT: WSP Environment and Energy
Project: Kingston ,NY
Lab Order: C1003049

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1003049-001A	SVE-1-031710	11	3/17/2010	3/23/2010
C1003049-002A	SVE-4A-031710	77	3/17/2010	3/23/2010
C1003049-003A	SVE-5-031810	74	3/18/2010	3/23/2010
C1003049-004A	AS/SVE-2-031910	25	3/19/2010	3/23/2010
C1003049-005A	AS/SVE-5-032010	18	3/20/2010	3/23/2010

Centek Laboratories, LLC

Sample Receipt Checklist

Client Name WSP CAZENOVIA NY | Date and Time Receive 3/23/2010

Work Order Numbe C1003049 | Received by JDS

Checklist completed by Signature Date 3/23/10 | Reviewed by Initials Date 3/23/10

Matrix: | Carrier name Courier (Centek)

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section be

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Lab Order: C1003049
Client: WSP Environment and Energy
Project: Kingston ,NY

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1003049-001A	SVE-1-031710	3/17/2010	Air	5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/24/2010
C1003049-002A	SVE-4A-031710			5ppb by Method TO15			3/24/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
C1003049-003A	SVE-5-031810	3/18/2010		5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/24/2010
C1003049-004A	AS/SVE-2-031910	3/19/2010		5ppb by Method TO15			3/24/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010
C1003049-005A	AS/SVE-5-032010	3/20/2010		5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/24/2010
				5ppb by Method TO15			3/25/2010
				5ppb by Method TO15			3/25/2010

Centek Laboratories

Analytical Report

Date: *11-Apr-10*

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-1-031710
Lab Order:	C1003049	**Tag Number:**	11
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-2			"Hg		3/23/2010
Lab Vacuum Out	-30			"Hg		3/23/2010
5PPB BY METHOD TO15		TO-15				Analyst: LL
1,1,1-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dibromoethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloropropane	< 5.0	5.0		ppbV	1	3/24/2010
1,3,5-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dioxane	< 10	10		ppbV	1	3/24/2010
2,2,4-trimethylpentane	< 5.0	5.0		ppbV	1	3/24/2010
4-ethyltoluene	< 5.0	5.0		ppbV	1	3/24/2010
Acetone	400	320		ppbV	32	3/25/2010 6:20:00 PM
Allyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Benzene	< 5.0	5.0		ppbV	1	3/24/2010
Benzyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Bromodichloromethane	< 5.0	5.0		ppbV	1	3/24/2010
Bromoform	< 5.0	5.0		ppbV	1	3/24/2010
Bromomethane	< 5.0	5.0		ppbV	1	3/24/2010
Carbon disulfide	< 5.0	5.0		ppbV	1	3/24/2010
Carbon tetrachloride	< 5.0	5.0		ppbV	1	3/24/2010
Chlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
Chloroethane	< 5.0	5.0		ppbV	1	3/24/2010
Chloroform	43	5.0		ppbV	1	3/24/2010
Chloromethane	< 5.0	5.0		ppbV	1	3/24/2010
cis-1,2-Dichloroethene	650	50		ppbV	10	3/25/2010 12:06:00 AM
cis-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Cyclohexane	< 5.0	5.0		ppbV	1	3/24/2010
Dibromochloromethane	< 5.0	5.0		ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-1-031710
Lab Order:	C1003049	**Tag Number:**	11
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Ethyl acetate	< 10	10		ppbV	1	3/24/2010
Ethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
Freon 11	< 5.0	5.0		ppbV	1	3/24/2010
Freon 113	< 5.0	5.0		ppbV	1	3/24/2010
Freon 114	< 5.0	5.0		ppbV	1	3/24/2010
Freon 12	< 5.0	5.0		ppbV	1	3/24/2010
Heptane	< 5.0	5.0		ppbV	1	3/24/2010
Hexachloro-1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
Hexane	< 5.0	5.0		ppbV	1	3/24/2010
Isopropyl alcohol	< 5.0	5.0		ppbV	1	3/24/2010
m&p-Xylene	5.2	10	J	ppbV	1	3/24/2010
Methyl Butyl Ketone	< 10	10		ppbV	1	3/24/2010
Methyl Ethyl Ketone	1200	320		ppbV	32	3/25/2010 6:20:00 PM
Methyl Isobutyl Ketone	5.2	10	J	ppbV	1	3/24/2010
Methyl tert-butyl ether	< 5.0	5.0		ppbV	1	3/24/2010
Methylene chloride	< 5.0	5.0		ppbV	1	3/24/2010
o-Xylene	1.6	5.0	J	ppbV	1	3/24/2010
Propylene	< 5.0	5.0		ppbV	1	3/24/2010
Styrene	< 5.0	5.0		ppbV	1	3/24/2010
Tetrachloroethylene	3700	800		ppbV	160	3/25/2010 5:50:00 PM
Tetrahydrofuran	2500	160		ppbV	32	3/25/2010 6:20:00 PM
Toluene	2.2	5.0	J	ppbV	1	3/24/2010
trans-1,2-Dichloroethene	13	5.0		ppbV	1	3/24/2010
trans-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Trichloroethene	6700	800		ppbV	160	3/25/2010 5:50:00 PM
Vinyl acetate	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl Bromide	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Surr: Bromofluorobenzene	112	70-130		%REC	1	3/24/2010
TIC: 1,3,5,7-Tetramethyl-adamantane	2.7	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5-Trimethyladamantane	6.8	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Dimethyl-5-ethyladamantane	3.4	0	JN	ppbV	1	3/24/2010
TIC: 1,4-Dimethyladamantane, [1.alpha.,	5.2	0	JN	ppbV	1	3/24/2010
TIC: 1-Bromoadamantane	5.7	0	JN	ppbV	1	3/24/2010
TIC: 1-Propene, 2-methyl-	15	0	JN	ppbV	1	3/24/2010
TIC: 2-Methyl-cis-3a,4,7,7a-tetrahydroi	5.1	0	JN	ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-1-031710
Lab Order:	C1003049	**Tag Number:**	11
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
TIC: 2-Propenal, 3-(2,6,6-trimethy 1-c	3.1	0	JN	ppbV	1	3/24/2010
TIC: 3-Ethyl-2-pentanol $$ 2-Pentanol,	3.2	0	JN	ppbV	1	3/24/2010
TIC: 4(1H)-Pteridinone, 2-amino-$$ Pte (20.52	8.1	0	JN	ppbV	1	3/24/2010
TIC: 4(1H)-Pteridinone, 2-amino-$$ Pte (20.84	3.1	0	JN	ppbV	1	3/24/2010
TIC: Adamantane $$ Tricyclo[3.3.1.13,7]	3.1	0	JN	ppbV	1	3/24/2010
TIC: Butane $$ n-Butane $$ Diethyl $$ F	17	0	JN	ppbV	1	3/24/2010
TIC: Butane, 2-methyl-	6.6	0	JN	ppbV	1	3/24/2010
TIC: Cis-1,4-dimethyladamantane	8.6	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, methyl-	5.8	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexanone	910	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 1-methyl-4-(1-methyle	8.5	0	JN	ppbV	1	3/24/2010
TIC: Cyclopentane, 1-methyl-1-(2-methyl	2.8	0	JN	ppbV	1	3/24/2010
TIC: Hexanal	7.2	0	JN	ppbV	1	3/24/2010
TIC: Isobutane	9.4	0	JN	ppbV	1	3/24/2010
TIC: Propane	15	0	JN	ppbV	1	3/24/2010
TIC: unknown	5.8	0	JN	ppbV	1	3/24/2010

NOTES:
TPH approximately 16280ppbV and/or 58318ugm3

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-4A-031710
Lab Order:	C1003049	**Tag Number:**	77
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-2			"Hg		3/23/2010
Lab Vacuum Out	-30			"Hg		3/23/2010
5PPB BY METHOD TO15		TO-15				Analyst: LL
1,1,1-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dibromoethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloropropane	< 5.0	5.0		ppbV	1	3/24/2010
1,3,5-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dioxane	< 10	10		ppbV	1	3/24/2010
2,2,4-trimethylpentane	< 5.0	5.0		ppbV	1	3/24/2010
4-ethyltoluene	< 5.0	5.0		ppbV	1	3/24/2010
Acetone	850	100		ppbV	10	3/25/2010 1:11:00 AM
Allyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Benzene	< 5.0	5.0		ppbV	1	3/24/2010
Benzyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Bromodichloromethane	< 5.0	5.0		ppbV	1	3/24/2010
Bromoform	< 5.0	5.0		ppbV	1	3/24/2010
Bromomethane	< 5.0	5.0		ppbV	1	3/24/2010
Carbon disulfide	< 5.0	5.0		ppbV	1	3/24/2010
Carbon tetrachloride	< 5.0	5.0		ppbV	1	3/24/2010
Chlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
Chloroethane	< 5.0	5.0		ppbV	1	3/24/2010
Chloroform	29	5.0		ppbV	1	3/24/2010
Chloromethane	< 5.0	5.0		ppbV	1	3/24/2010
cis-1,2-Dichloroethene	570	50		ppbV	10	3/25/2010 1:11:00 AM
cis-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Cyclohexane	< 5.0	5.0		ppbV	1	3/24/2010
Dibromochloromethane	< 5.0	5.0		ppbV	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-4A-031710
Lab Order:	C1003049	**Tag Number:**	77
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Ethyl acetate	< 10	10		ppbV	1	3/24/2010
Ethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
Freon 11	< 5.0	5.0		ppbV	1	3/24/2010
Freon 113	< 5.0	5.0		ppbV	1	3/24/2010
Freon 114	< 5.0	5.0		ppbV	1	3/24/2010
Freon 12	< 5.0	5.0		ppbV	1	3/24/2010
Heptane	< 5.0	5.0		ppbV	1	3/24/2010
Hexachloro-1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
Hexane	< 5.0	5.0		ppbV	1	3/24/2010
Isopropyl alcohol	< 5.0	5.0		ppbV	1	3/24/2010
m&p-Xylene	4.9	10	J	ppbV	1	3/24/2010
Methyl Butyl Ketone	< 10	10		ppbV	1	3/24/2010
Methyl Ethyl Ketone	730	320		ppbV	32	3/25/2010 7:22:00 PM
Methyl Isobutyl Ketone	4.6	10	J	ppbV	1	3/24/2010
Methyl tert-butyl ether	< 5.0	5.0		ppbV	1	3/24/2010
Methylene chloride	< 5.0	5.0		ppbV	1	3/24/2010
o-Xylene	1.6	5.0	J	ppbV	1	3/24/2010
Propylene	< 5.0	5.0		ppbV	1	3/24/2010
Styrene	< 5.0	5.0		ppbV	1	3/24/2010
Tetrachloroethylene	2700	160		ppbV	32	3/25/2010 7:22:00 PM
Tetrahydrofuran	1600	160		ppbV	32	3/25/2010 7:22:00 PM
Toluene	2.0	5.0	J	ppbV	1	3/24/2010
trans-1,2-Dichloroethene	11	5.0		ppbV	1	3/24/2010
trans-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Trichloroethene	4200	800		ppbV	160	3/25/2010 6:51:00 PM
Vinyl acetate	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl Bromide	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Surr: Bromofluorobenzene	113	70-130		%REC	1	3/24/2010
TIC: 1,2-Benzenedicarboxylic acid, ethy	5.2	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer) (20.51)	50	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer) (21.02)	20	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer) (21.17)	17	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5,6-Tetramethyladamantane	14	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5-Trimethyladamantane	37	0	JN	ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-4A-031710
Lab Order:	C1003049	**Tag Number:**	77
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
TIC: 1,3-di-n-Propyladamantane	16	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Dimethyl-5-n-propyl-adamantane	20	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Hexadiene, 3-ethyl-2,5-dimethy	6.4	0	JN	ppbV	1	3/24/2010
TIC: 1,4-Dimethyladamantane, [1.alpha.,	26	0	JN	ppbV	1	3/24/2010
TIC: 1,6-Octadiene, 2,5-dimethyl-, (E)-	15	0	JN	ppbV	1	3/24/2010
TIC: 1-Methylbicyclo[3.2.1]octane	10	0	JN	ppbV	1	3/24/2010
TIC: 1-Propene, 2-methyl-	7.5	0	JN	ppbV	1	3/24/2010
TIC: 2-(2-Ethyl-1,3-dimethyl-cyclopent-	10	0	JN	ppbV	1	3/24/2010
TIC: 2-C12H22 $$ 2-Dodecyne	4.2	0	JN	ppbV	1	3/24/2010
TIC: 2-Iodoadamantane	30	0	JN	ppbV	1	3/24/2010
TIC: 2-Methyladamantane $$ Tricyclo[3.3	15	0	JN	ppbV	1	3/24/2010
TIC: 3-Dodecyne $$ 3-C12H22	10	0	JN	ppbV	1	3/24/2010
TIC: 3-Hydroxy-4-isopropyl-5,10-dimethy	3.5	0	JN	ppbV	1	3/24/2010
TIC: 4-Fluoro-2-(trifluoromethyl)benzam	4.2	0	JN	ppbV	1	3/24/2010
TIC: 4-Methylimidazole-5-butyric acid	6.5	0	JN	ppbV	1	3/24/2010
TIC: Adamantane, 1,3-dimethyl-	13	0	JN	ppbV	1	3/24/2010
TIC: Adamantane-1-carboxylic acid $$ Tr	6.8	0	JN	ppbV	1	3/24/2010
TIC: Benzene, 1,2,3-trimethyl-	2.9	0	JN	ppbV	1	3/24/2010
TIC: Benzene, 1-(1,1-dimethylethyl)-4-m	7.8	0	JN	ppbV	1	3/24/2010
TIC: Benzoic acid, p-tert-butyl-	5.5	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]hept-2-en-2-amine, N	9.0	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]heptane, 2,2,3-trime	18	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.2]octane, 1,2,3,6-tetr (19.08	7.1	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.2]octane, 1,2,3,6-tetr (19.38	6.6	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[3.1.1]heptan-3-one, 2,6,6-	2.5	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[4.3.0]nonane, 2-methylene-	18	0	JN	ppbV	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-4A-031710
Lab Order:	C1003049	**Tag Number:**	77
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
TIC: Butane $$ n-Butane $$ Diethyl $$ F	18	0	JN	ppbV	1	3/24/2010
TIC: Butane, 2-methyl-	12	0	JN	ppbV	1	3/24/2010
TIC: cis, cis-2-Ethylbicyclo[4.4.0]deca	8.9	0	JN	ppbV	1	3/24/2010
TIC: Cis-1,4-dimethyladamantane	46	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 1,2-diethyl-3-methyl-	2.8	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 3,4-bis(1-methylethen	8.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexanol, 5-methyl-2-(1-methyl	3.9	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexanone	660	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 3-methyl-6-(1-methyle	7.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclopentane, 1-methyl-1-(2-methyl	4.8	0	JN	ppbV	1	3/24/2010
TIC: Cyclopentanecarboxylic acid 3-iso	6.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclopentasiloxane, decamethyl-	5.4	0	JN	ppbV	1	3/24/2010
TIC: Cyclopropane, 1,2-dimethyl-, trans	3.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclotetrasiloxane, octamethyl-	17	0	JN	ppbV	1	3/24/2010
TIC: Cyclotrisiloxane, hexamethyl-	20	0	JN	ppbV	1	3/24/2010
TIC: Decalin, anti-1-methyl-, cis-	8.1	0	JN	ppbV	1	3/24/2010
TIC: Diallyldivinylsilane	3.2	0	JN	ppbV	1	3/24/2010
TIC: Hexanal $$ n-Caproaldehyde $$ n-He	6.5	0	JN	ppbV	1	3/24/2010
TIC: Isobutane	14	0	JN	ppbV	1	3/24/2010
TIC: Limonene	5.8	0	JN	ppbV	1	3/24/2010
TIC: Pentane, 2-methyl-	4.8	0	JN	ppbV	1	3/24/2010
TIC: Propane $$ n-Propane $$ Dimethylme	16	0	JN	ppbV	1	3/24/2010
TIC: tert-Butyldimethylsilanol	4.1	0	JN	ppbV	1	3/24/2010
TIC: trans,trans-1,10-Dimethylspiro[4.5	14	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.09)	6.8	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.13)	17	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.18)	22	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.3)	12	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.66)	9.2	0	JN	ppbV	1	3/24/2010

Qualifiers:

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B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-4A-031710
Lab Order:	C1003049	**Tag Number:**	77
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		TO-15				Analyst: LL
TIC: unknown (20.71)	10	0	JN	ppbV	1	3/24/2010

NOTES:
TPH approximately 12100ppbV and/or 43345ugm3

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-5-031810
Lab Order:	C1003049	**Tag Number:**	74
Project:	Kingston ,NY	**Collection Date:**	3/18/2010
Lab ID:	C1003049-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-2			"Hg		3/23/2010
Lab Vacuum Out	-30			"Hg		3/23/2010
5PPB BY METHOD TO15		TO-15				Analyst: LL
1,1,1-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dibromoethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloropropane	< 5.0	5.0		ppbV	1	3/24/2010
1,3,5-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dioxane	< 10	10		ppbV	1	3/24/2010
2,2,4-trimethylpentane	< 5.0	5.0		ppbV	1	3/24/2010
4-ethyltoluene	< 5.0	5.0		ppbV	1	3/24/2010
Acetone	410	100		ppbV	10	3/25/2010 2:16:00 AM
Allyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Benzene	< 5.0	5.0		ppbV	1	3/24/2010
Benzyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Bromodichloromethane	< 5.0	5.0		ppbV	1	3/24/2010
Bromoform	< 5.0	5.0		ppbV	1	3/24/2010
Bromomethane	< 5.0	5.0		ppbV	1	3/24/2010
Carbon disulfide	< 5.0	5.0		ppbV	1	3/24/2010
Carbon tetrachloride	< 5.0	5.0		ppbV	1	3/24/2010
Chlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
Chloroethane	< 5.0	5.0		ppbV	1	3/24/2010
Chloroform	22	5.0		ppbV	1	3/24/2010
Chloromethane	< 5.0	5.0		ppbV	1	3/24/2010
cis-1,2-Dichloroethene	480	50		ppbV	10	3/25/2010 2:16:00 AM
cis-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Cyclohexane	< 5.0	5.0		ppbV	1	3/24/2010
Dibromochloromethane	< 5.0	5.0		ppbV	1	3/24/2010

Qualifiers:

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B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-5-031810
Lab Order:	C1003049	**Tag Number:**	74
Project:	Kingston ,NY	**Collection Date:**	3/18/2010
Lab ID:	C1003049-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Ethyl acetate	< 10	10		ppbV	1	3/24/2010
Ethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
Freon 11	< 5.0	5.0		ppbV	1	3/24/2010
Freon 113	< 5.0	5.0		ppbV	1	3/24/2010
Freon 114	< 5.0	5.0		ppbV	1	3/24/2010
Freon 12	< 5.0	5.0		ppbV	1	3/24/2010
Heptane	< 5.0	5.0		ppbV	1	3/24/2010
Hexachloro-1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
Hexane	< 5.0	5.0		ppbV	1	3/24/2010
Isopropyl alcohol	< 5.0	5.0		ppbV	1	3/24/2010
m&p-Xylene	5.3	10	J	ppbV	1	3/24/2010
Methyl Butyl Ketone	< 10	10		ppbV	1	3/24/2010
Methyl Ethyl Ketone	640	320		ppbV	32	3/25/2010 8:24:00 PM
Methyl Isobutyl Ketone	4.7	10	J	ppbV	1	3/24/2010
Methyl tert-butyl ether	< 5.0	5.0		ppbV	1	3/24/2010
Methylene chloride	< 5.0	5.0		ppbV	1	3/24/2010
o-Xylene	1.8	5.0	J	ppbV	1	3/24/2010
Propylene	< 5.0	5.0		ppbV	1	3/24/2010
Styrene	< 5.0	5.0		ppbV	1	3/24/2010
Tetrachloroethylene	3600	400		ppbV	80	3/25/2010 7:53:00 PM
Tetrahydrofuran	1300	160		ppbV	32	3/25/2010 8:24:00 PM
Toluene	2.9	5.0	J	ppbV	1	3/24/2010
trans-1,2-Dichloroethene	9.0	5.0		ppbV	1	3/24/2010
trans-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Trichloroethene	5500	400		ppbV	80	3/25/2010 7:53:00 PM
Vinyl acetate	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl Bromide	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Surr: Bromofluorobenzene	111	70-130		%REC	1	3/24/2010
TIC: (-)-Neomenthylacetate	6.5	0	JN	ppbV	1	3/24/2010
TIC: 1,10-Dimethyl-2-methylene-trans-de	17	0	JN	ppbV	1	3/24/2010
TIC: 1,2,3-Trimethyl-cyclopent-2-enecar	7.4	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer) (20.51)	50	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer) (21.02)	20	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer) (21.41)	4.4	0	JN	ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-5-031810
Lab Order:	C1003049	**Tag Number:**	74
Project:	Kingston ,NY	**Collection Date:**	3/18/2010
Lab ID:	C1003049-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
TIC: 1,3,5,6-Tetramethyladamantane	2.8	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5-Trimethyladamantane	40	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Dimethyl-5-n-propyl-adamantane	22	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Dimethyladamantan-5-carboxylic	4.4	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Hexadiene, 2,5-dimethyl-	17	0	JN	ppbV	1	3/24/2010
TIC: 1-Adamantanemethylamine $$ Tricycl	6.9	0	JN	ppbV	1	3/24/2010
TIC: 1-Bromoadamantane	31	0	JN	ppbV	1	3/24/2010
TIC: 1-Butanamine, N-(2-furanylmethylen	11	0	JN	ppbV	1	3/24/2010
TIC: 1-Cyclohexene-1-acetaldehyde, 2,6,	9.8	0	JN	ppbV	1	3/24/2010
TIC: 1-Methylbicyclo[3.2.1]octane	10	0	JN	ppbV	1	3/24/2010
TIC: 1-Propene, 2-methyl-	4.8	0	JN	ppbV	1	3/24/2010
TIC: 2-Cyclopentene-1-carboxylic acid,	3.0	0	JN	ppbV	1	3/24/2010
TIC: 2-Methyladamantane $$ Tricyclo[3.3	16	0	JN	ppbV	1	3/24/2010
TIC: 2H-Inden-2-one, octahydro-3a-methy	4.5	0	JN	ppbV	1	3/24/2010
TIC: 3',4'-(Methylenedioxy)acetophenone	7.7	0	JN	ppbV	1	3/24/2010
TIC: 3,3,3-Trifluoro-2-hydroxy-propioni	20	0	JN	ppbV	1	3/24/2010
TIC: 3,3-Dimethyl-hepta-4,5-dien-2-one	4.3	0	JN	ppbV	1	3/24/2010
TIC: 3-Buten-2-one, 4-(2,6,6-trimethyl-	13	0	JN	ppbV	1	3/24/2010
TIC: 3-Octene, 2,2-dimethyl-	2.8	0	JN	ppbV	1	3/24/2010
TIC: Adamantane, 1,3-dimethyl- $$ Tricy	15	0	JN	ppbV	1	3/24/2010
TIC: Alkane: Cyclic(unknown)	7.2	0	JN	ppbV	1	3/24/2010
TIC: Benzene, 1-(1,1-dimethylethyl)-4-e	8.1	0	JN	ppbV	1	3/24/2010
TIC: Benzene, 1-ethoxy-4-methyl-	23	0	JN	ppbV	1	3/24/2010
TIC: Benzo[b]thiophene, 1,1-dioxide $$	6.3	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]heptane-1-methanesul	14	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.2]octane, 1,2,3,6-tetr	5.5	0	JN	ppbV	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-5-031810
Lab Order:	C1003049	**Tag Number:**	74
Project:	Kingston ,NY	**Collection Date:**	3/18/2010
Lab ID:	C1003049-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		TO-15				Analyst: LL
TIC: Bicyclo[4.3.0]nonane, 2-methylene-	18	0	JN	ppbV	1	3/24/2010
TIC: Butane	17	0	JN	ppbV	1	3/24/2010
TIC: Butane, 2-methyl-	17	0	JN	ppbV	1	3/24/2010
TIC: cis,cis-2,10-Dimethylspiro[5.5]und	3.3	0	JN	ppbV	1	3/24/2010
TIC: Cis-1,4-dimethyladamantane	47	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, (2-ethyl-1-methylbuty	21	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 1,1,4,4-tetramethyl-2	27	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 1,2-diethyl-3-methyl-	3.3	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 2,4-diethyl-1-methyl-	4.0	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexanone	520	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 3-(1-hexenyl)-, (E)-	7.4	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 4-methyl-1-(1-methyle (19.45	6.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 4-methyl-1-(1-methyle (19.8)	7.3	0	JN	ppbV	1	3/24/2010
TIC: Cyclopropane, 1,2-dimethyl-, trans	3.0	0	JN	ppbV	1	3/24/2010
TIC: Cyclotetrasiloxane, octamethyl-	4.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclotrisiloxane, hexamethyl	4.6	0	JN	ppbV	1	3/24/2010
TIC: Ethane, 1,1-dichloro-1-nitro- $$ E	3.2	0	JN	ppbV	1	3/24/2010
TIC: Hexanal	6.3	0	JN	ppbV	1	3/24/2010
TIC: Hydroxy-3-methoxyphenylacetonitril	17	0	JN	ppbV	1	3/24/2010
TIC: Isobutane	5.6	0	JN	ppbV	1	3/24/2010
TIC: Limonene	6.4	0	JN	ppbV	1	3/24/2010
TIC: Naphthalene, decahydro-2,3-dimethy	14	0	JN	ppbV	1	3/24/2010
TIC: Oxiranecarboxaldehyde, 3-methyl-3-	3.8	0	JN	ppbV	1	3/24/2010
TIC: Pentane, 2-methyl-	6.5	0	JN	ppbV	1	3/24/2010
TIC: Phenol, 3-propyl- $$ Phenol, m-pro	9.5	0	JN	ppbV	1	3/24/2010
TIC: Propane	12	0	JN	ppbV	1	3/24/2010
TIC: Spiro[3.5]nonan-1-one, 5-methyl-,	8.9	0	JN	ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-5-031810
Lab Order:	C1003049	**Tag Number:**	74
Project:	Kingston ,NY	**Collection Date:**	3/18/2010
Lab ID:	C1003049-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
TIC: Trivinyl(1,3,3-tribromopropyl)sila	8.7	0	JN	ppbV	1	3/24/2010
TIC: unknown	3.5	0	JN	ppbV	1	3/24/2010

NOTES:
TPH approximately 13200ppbV and/or 47285ugm3

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-2-031910
Lab Order:	C1003049	**Tag Number:**	25
Project:	Kingston ,NY	**Collection Date:**	3/19/2010
Lab ID:	C1003049-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-2			"Hg		3/23/2010
Lab Vacuum Out	-30			"Hg		3/23/2010
5PPB BY METHOD TO15		TO-15				Analyst: LL
1,1,1-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dibromoethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloropropane	< 5.0	5.0		ppbV	1	3/24/2010
1,3,5-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dioxane	< 10	10		ppbV	1	3/24/2010
2,2,4-trimethylpentane	< 5.0	5.0		ppbV	1	3/24/2010
4-ethyltoluene	< 5.0	5.0		ppbV	1	3/24/2010
Acetone	260	100		ppbV	10	3/25/2010 3:21:00 AM
Allyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Benzene	< 5.0	5.0		ppbV	1	3/24/2010
Benzyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Bromodichloromethane	< 5.0	5.0		ppbV	1	3/24/2010
Bromoform	< 5.0	5.0		ppbV	1	3/24/2010
Bromomethane	< 5.0	5.0		ppbV	1	3/24/2010
Carbon disulfide	< 5.0	5.0		ppbV	1	3/24/2010
Carbon tetrachloride	< 5.0	5.0		ppbV	1	3/24/2010
Chlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
Chloroethane	< 5.0	5.0		ppbV	1	3/24/2010
Chloroform	27	5.0		ppbV	1	3/24/2010
Chloromethane	5.4	5.0		ppbV	1	3/24/2010
cis-1,2-Dichloroethene	570	50		ppbV	10	3/25/2010 3:21:00 AM
cis-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Cyclohexane	< 5.0	5.0		ppbV	1	3/24/2010
Dibromochloromethane	< 5.0	5.0		ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-2-031910
Lab Order:	C1003049	**Tag Number:**	25
Project:	Kingston ,NY	**Collection Date:**	3/19/2010
Lab ID:	C1003049-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		TO-15				Analyst: LL
Ethyl acetate	< 10	10		ppbV	1	3/24/2010
Ethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
Freon 11	< 5.0	5.0		ppbV	1	3/24/2010
Freon 113	< 5.0	5.0		ppbV	1	3/24/2010
Freon 114	< 5.0	5.0		ppbV	1	3/24/2010
Freon 12	< 5.0	5.0		ppbV	1	3/24/2010
Heptane	< 5.0	5.0		ppbV	1	3/24/2010
Hexachloro-1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
Hexane	< 5.0	5.0		ppbV	1	3/24/2010
Isopropyl alcohol	< 5.0	5.0		ppbV	1	3/24/2010
m&p-Xylene	2.5	10	J	ppbV	1	3/24/2010
Methyl Butyl Ketone	< 10	10		ppbV	1	3/24/2010
Methyl Ethyl Ketone	600	100		ppbV	10	3/25/2010 3:21:00 AM
Methyl Isobutyl Ketone	1.9	10	J	ppbV	1	3/24/2010
Methyl tert-butyl ether	< 5.0	5.0		ppbV	1	3/24/2010
Methylene chloride	< 5.0	5.0		ppbV	1	3/24/2010
o-Xylene	< 5.0	5.0		ppbV	1	3/24/2010
Propylene	< 5.0	5.0		ppbV	1	3/24/2010
Styrene	< 5.0	5.0		ppbV	1	3/24/2010
Tetrachloroethylene	4300	400		ppbV	80	3/25/2010 8:55:00 PM
Tetrahydrofuran	670	160		ppbV	32	3/25/2010 9:26:00 PM
Toluene	2.7	5.0	J	ppbV	1	3/24/2010
trans-1,2-Dichloroethene	11	5.0		ppbV	1	3/24/2010
trans-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Trichloroethene	6500	400		ppbV	80	3/25/2010 8:55:00 PM
Vinyl acetate	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl Bromide	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Surr: Bromofluorobenzene	113	70-130		%REC	1	3/24/2010
TIC: (1s,4R,7R)-(-)-4,8,8-Trimethy bic	8.1	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer)	56	0	JN	ppbV	1	3/24/2010
TIC: 1,3,4-Trimethyladamantane	15	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5,-Tetramethyl-adamantane(isomer)	13	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5,6-Tetramethyladamantane	3.7	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5-Trimethyladamantane	34	0	JN	ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-2-031910
Lab Order:	C1003049	**Tag Number:**	25
Project:	Kingston ,NY	**Collection Date:**	3/19/2010
Lab ID:	C1003049-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
TIC: 1,3-Bis(bromomethyl)cyclohexane	7.4	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Dimethyl-5-ethyladamantane	23	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Dimethyl-5-n-hexyladamantane	22	0	JN	ppbV	1	3/24/2010
TIC: 1-Bromoadamantane	19	0	JN	ppbV	1	3/24/2010
TIC: 1-Methyl-3-ethyladamantane	13	0	JN	ppbV	1	3/24/2010
TIC: 1H-Indene, 1-ethyloctahydro-7a-met	13	0	JN	ppbV	1	3/24/2010
TIC: 2(1H)-Pentalenone, hexahydro-4-iod	3.0	0	JN	ppbV	1	3/24/2010
TIC: 2,3-Bornanediol	3.9	0	JN	ppbV	1	3/24/2010
TIC: 2,5-Heptadien-4-one, 2,6-dimethyl-	8.5	0	JN	ppbV	1	3/24/2010
TIC: 2,6-Dimethyl-4H-furo[3,2-c]pyran-4	8.4	0	JN	ppbV	1	3/24/2010
TIC: 2-(1-Hydroxycycloheptyl)-furan	4.2	0	JN	ppbV	1	3/24/2010
TIC: 2-Methyladamantane $$ Tricyclo[3.3	14	0	JN	ppbV	1	3/24/2010
TIC: 2-Propenal, 3-(2,6,6-trimethy 1-c	4.2	0	JN	ppbV	1	3/24/2010
TIC: 2-Pyrimidinamine, 4-(trifluorometh	3.8	0	JN	ppbV	1	3/24/2010
TIC: 2H-Inden-2-one, 1,4,5,6,7,7a hexah	10	0	JN	ppbV	1	3/24/2010
TIC: 2H-Inden-2-one, octahydro-3a-methy	4.6	0	JN	ppbV	1	3/24/2010
TIC: 7-(2,6-Dimethyl-hepta-1,5-dienyl)-	4.1	0	JN	ppbV	1	3/24/2010
TIC: Acetaminophen	12	0	JN	ppbV	1	3/24/2010
TIC: Benzene, 1-ethoxy-4-methyl- $$ Phe	22	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]heptan-2-one, 1,7,7-	12	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]heptane, 2,2,3-trime	20	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]heptane-1-methanesul	16	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.2]octane, 1,2,3,6-tetr	2.6	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[3.1.1]heptan-3-one, 2,6,6-	2.9	0	JN	ppbV	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-2-031910
Lab Order:	C1003049	**Tag Number:**	25
Project:	Kingston ,NY	**Collection Date:**	3/19/2010
Lab ID:	C1003049-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		TO-15				Analyst: LL
TIC: Bicyclo[3.1.1]heptane, 2,6,6-trime	10	0	JN	ppbV	1	3/24/2010
TIC: Butane	16	0	JN	ppbV	1	3/24/2010
TIC: Butane, 2-methyl-	12	0	JN	ppbV	1	3/24/2010
TIC: Cis-1,4-dimethyladamantane	58	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, (2-ethyl-1-methyl-1-b	17	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 1,1,4,4-tetramethyl-2	14	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 1,2-diethyl-3-methyl-	3.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 3,4-bis(1-methylethen	7.1	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexanone	550	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 1-methyl-4-(1-methyle	6.4	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 3,3,5-trimethyl $$.	2.7	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene,1-(2-methylpropyl)-	5.2	0	JN	ppbV	1	3/24/2010
TIC: Cyclotetrasiloxane, octamethyl-	4.9	0	JN	ppbV	1	3/24/2010
TIC: Cyclotrisiloxane, hexamethyl	4.3	0	JN	ppbV	1	3/24/2010
TIC: Hexanal $$ n-Caproaldehyde $$ n-He	3.0	0	JN	ppbV	1	3/24/2010
TIC: Pentane, 2-methyl-	3.5	0	JN	ppbV	1	3/24/2010
TIC: Propane	7.6	0	JN	ppbV	1	3/24/2010
TIC: Silane, trichloro(2-tricyclo[3.3.1	7.0	0	JN	ppbV	1	3/24/2010
TIC: Spiro[3.5]nonan-1-one, 5-methyl-,	7.3	0	JN	ppbV	1	3/24/2010
TIC: trans-Decalin, 2-methyl-	6.4	0	JN	ppbV	1	3/24/2010
TIC: Undecane, 4,7-dimethyl-	3.1	0	JN	ppbV	1	3/24/2010
TIC: unknown (12.11)	3.1	0	JN	ppbV	1	3/24/2010
TIC: unknown (19.33)	3.4	0	JN	ppbV	1	3/24/2010
TIC: unknown (19.97)	4.2	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.13)	15	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.66)	8.0	0	JN	ppbV	1	3/24/2010
TIC: unknown (3.92)	14	0	JN	ppbV	1	3/24/2010

NOTES:
TPH approximately 14130ppbV and/or 50617ugm3

Qualifiers:				
	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-2-031910
Lab Order:	C1003049	**Tag Number:**	25
Project:	Kingston ,NY	**Collection Date:**	3/19/2010
Lab ID:	C1003049-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-5-032010
Lab Order:	C1003049	**Tag Number:**	18
Project:	Kingston ,NY	**Collection Date:**	3/20/2010
Lab ID:	C1003049-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD				Analyst:
Lab Vacuum In	-2			"Hg		3/23/2010
Lab Vacuum Out	-30			"Hg		3/23/2010
5PPB BY METHOD TO15		TO-15				Analyst: LL
1,1,1-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1,2-Trichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,1-Dichloroethene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2,4-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dibromoethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloroethane	< 5.0	5.0		ppbV	1	3/24/2010
1,2-Dichloropropane	< 5.0	5.0		ppbV	1	3/24/2010
1,3,5-Trimethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
1,3-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dichlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
1,4-Dioxane	< 10	10		ppbV	1	3/24/2010
2,2,4-trimethylpentane	< 5.0	5.0		ppbV	1	3/24/2010
4-ethyltoluene	< 5.0	5.0		ppbV	1	3/24/2010
Acetone	160	100		ppbV	10	3/25/2010 4:26:00 AM
Allyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Benzene	< 5.0	5.0		ppbV	1	3/24/2010
Benzyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Bromodichloromethane	< 5.0	5.0		ppbV	1	3/24/2010
Bromoform	< 5.0	5.0		ppbV	1	3/24/2010
Bromomethane	< 5.0	5.0		ppbV	1	3/24/2010
Carbon disulfide	< 5.0	5.0		ppbV	1	3/24/2010
Carbon tetrachloride	< 5.0	5.0		ppbV	1	3/24/2010
Chlorobenzene	< 5.0	5.0		ppbV	1	3/24/2010
Chloroethane	< 5.0	5.0		ppbV	1	3/24/2010
Chloroform	14	5.0		ppbV	1	3/24/2010
Chloromethane	< 5.0	5.0		ppbV	1	3/24/2010
cis-1,2-Dichloroethene	380	50		ppbV	10	3/25/2010 4:26:00 AM
cis-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Cyclohexane	< 5.0	5.0		ppbV	1	3/24/2010
Dibromochloromethane	< 5.0	5.0		ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-5-032010
Lab Order:	C1003049	**Tag Number:**	18
Project:	Kingston ,NY	**Collection Date:**	3/20/2010
Lab ID:	C1003049-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Ethyl acetate	< 10	10		ppbV	1	3/24/2010
Ethylbenzene	< 5.0	5.0		ppbV	1	3/24/2010
Freon 11	< 5.0	5.0		ppbV	1	3/24/2010
Freon 113	< 5.0	5.0		ppbV	1	3/24/2010
Freon 114	< 5.0	5.0		ppbV	1	3/24/2010
Freon 12	< 5.0	5.0		ppbV	1	3/24/2010
Heptane	1.2	5.0	J	ppbV	1	3/24/2010
Hexachloro-1,3-butadiene	< 5.0	5.0		ppbV	1	3/24/2010
Hexane	< 5.0	5.0		ppbV	1	3/24/2010
Isopropyl alcohol	7.9	5.0		ppbV	1	3/24/2010
m&p-Xylene	2.8	10	J	ppbV	1	3/24/2010
Methyl Butyl Ketone	< 10	10		ppbV	1	3/24/2010
Methyl Ethyl Ketone	350	100		ppbV	10	3/25/2010 4:26:00 AM
Methyl Isobutyl Ketone	2.0	10	J	ppbV	1	3/24/2010
Methyl tert-butyl ether	< 5.0	5.0		ppbV	1	3/24/2010
Methylene chloride	< 5.0	5.0		ppbV	1	3/24/2010
o-Xylene	< 5.0	5.0		ppbV	1	3/24/2010
Propylene	< 5.0	5.0		ppbV	1	3/24/2010
Styrene	< 5.0	5.0		ppbV	1	3/24/2010
Tetrachloroethylene	2600	160		ppbV	32	3/25/2010 10:29:00 PM
Tetrahydrofuran	690	50		ppbV	10	3/25/2010 4:26:00 AM
Toluene	2.7	5.0	J	ppbV	1	3/24/2010
trans-1,2-Dichloroethene	6.3	5.0		ppbV	1	3/24/2010
trans-1,3-Dichloropropene	< 5.0	5.0		ppbV	1	3/24/2010
Trichloroethene	4000	400		ppbV	80	3/25/2010 9:57:00 PM
Vinyl acetate	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl Bromide	< 5.0	5.0		ppbV	1	3/24/2010
Vinyl chloride	< 5.0	5.0		ppbV	1	3/24/2010
Surr: Bromofluorobenzene	111	70-130		%REC	1	3/24/2010
TIC: 1,1,6,6-Tetramethylspiro[4.4]nonan	18	0	JN	ppbV	1	3/24/2010
TIC: 1,3,-Trimethyladamantane(isomer)	27	0	JN	ppbV	1	3/24/2010
TIC: 1,3,5-Trimethyladamantane	39	0	JN	ppbV	1	3/24/2010
TIC: 1,3-Dimethyl-5-ethyladamantane	27	0	JN	ppbV	1	3/24/2010
TIC: 1-Methylbicyclo[3.2.1]octane	11	0	JN	ppbV	1	3/24/2010
TIC: 1-n-butyladamantane	32	0	JN	ppbV	1	3/24/2010
TIC: 2-Dodecen-1-yl(-)succinic anhydrid	15	0	JN	ppbV	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-5-032010
Lab Order:	C1003049	**Tag Number:**	18
Project:	Kingston ,NY	**Collection Date:**	3/20/2010
Lab ID:	C1003049-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
TIC: 2-Propenal, 3-(2,6,6-trimethy 1-c	56	0	JN	ppbV	1	3/24/2010
TIC: 2H-1,2-Oxaborin, 3,6-dihydrc 2,3,3	3.5	0	JN	ppbV	1	3/24/2010
TIC: 2H-Inden-2-one, octahydro-3a-methy	4.7	0	JN	ppbV	1	3/24/2010
TIC: 3,6-Dimethyl-2,3,3a,4,5,7a-hexahyd	7.0	0	JN	ppbV	1	3/24/2010
TIC: 3-Buten-2-one, 4-(2,6,6-trimethyl-	19	0	JN	ppbV	1	3/24/2010
TIC: 3-Menthene	6.2	0	JN	ppbV	1	3/24/2010
TIC: 3-Octene, 2,2-dimethyl-	5.6	0	JN	ppbV	1	3/24/2010
TIC: 4-Acetylocta-1,2-diene	2.7	0	JN	ppbV	1	3/24/2010
TIC: 9-Undecenol, 2,10-dimethyl-	4.0	0	JN	ppbV	1	3/24/2010
TIC: Adamantane	19	0	JN	ppbV	1	3/24/2010
TIC: Adamantane, 1,3-dimethyl- (19.84)	28	0	JN	ppbV	1	3/24/2010
TIC: Adamantane, 1,3-dimethyl- (20.76)	54	0	JN	ppbV	1	3/24/2010
TIC: Adamantane-1-carboxylic ac	9.6	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]heptane, 2,2,3-trime (20.04	20	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.1]heptane, 2,2,3-trime (20.13	19	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[2.2.2]octane, 1,2,3,6-tetr	6.9	0	JN	ppbV	1	3/24/2010
TIC: Bicyclo[4.1.0]heptane, 7-pentyl-	5.4	0	JN	ppbV	1	3/24/2010
TIC: Bromo-4-fluoroacetophenone $$ p-Fl	5.5	0	JN	ppbV	1	3/24/2010
TIC: Butane	18	0	JN	ppbV	1	3/24/2010
TIC: Butane, 2-methyl-	13	0	JN	ppbV	1	3/24/2010
TIC: Cyclodecene, 1-methyl-	9.8	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 1,2-diethyl-3-methyl-	3.2	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexane, 3,4-bis(1-methylethen	10	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexanecarboxylic acid, 4-prop	5.3	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexanone	240	0	JN	ppbV	1	3/24/2010
TIC: Cyclohexene, 1-methyl-4-(1-methyle	7.9	0	JN	ppbV	1	3/24/2010
TIC: Cyclopropane, 1,1-dimethyl-	3.7	0	JN	ppbV	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-5-032010
Lab Order:	C1003049	**Tag Number:**	18
Project:	Kingston ,NY	**Collection Date:**	3/20/2010
Lab ID:	C1003049-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				**Analyst: LL**
TIC: Cyclotetrasiloxane, octamethyl-	9.6	0	JN	ppbV	1	3/24/2010
TIC: Cyclotrisiloxane, hexamethyl	6.0	0	JN	ppbV	1	3/24/2010
TIC: Decane, 3,7-dimethyl-	5.3	0	JN	ppbV	1	3/24/2010
TIC: Hexahydroindole	6.4	0	JN	ppbV	1	3/24/2010
TIC: Hexanal	2.9	0	JN	ppbV	1	3/24/2010
TIC: Imidazole-5-carboxylic amide N-me	7.5	0	JN	ppbV	1	3/24/2010
TIC: Isobutane	10	0	JN	ppbV	1	3/24/2010
TIC: Naphthalene, 1,2,3,4,4a,5,6, octa	17	0	JN	ppbV	1	3/24/2010
TIC: Naphthalene, decahydro-1,1-dimethy	38	0	JN	ppbV	1	3/24/2010
TIC: Naphthalene, decahydro-1,8 dimeth	4.4	0	JN	ppbV	1	3/24/2010
TIC: Naphthalene, decahydro-2,6-dimethy	15	0	JN	ppbV	1	3/24/2010
TIC: Oxiranecarboxylic acid, 3-phenyl-,	25	0	JN	ppbV	1	3/24/2010
TIC: Pentane, 2-methyl- $$ Isohexane $$	3.8	0	JN	ppbV	1	3/24/2010
TIC: Propane	17	0	JN	ppbV	1	3/24/2010
TIC: Sulfinate, t-butyl-O-menthyl-	3.7	0	JN	ppbV	1	3/24/2010
TIC: trans, cis-3-Ethylbicyclo[4.4.0]de	11	0	JN	ppbV	1	3/24/2010
TIC: trans-1,2-Bis(bromomethyl)cyclohex	7.5	0	JN	ppbV	1	3/24/2010
TIC: Tricyclo[4.3.1.13,8]undecane 1-br	15	0	JN	ppbV	1	3/24/2010
TIC: unknown (19.97)	10	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.08)	7.5	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.18)	24	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.25)	12	0	JN	ppbV	1	3/24/2010
TIC: unknown (20.98)	10	0	JN	ppbV	1	3/24/2010
TIC: unknown (21.1)	5.5	0	JN	ppbV	1	3/24/2010
TIC: unknown (21.23)	4.9	0	JN	ppbV	1	3/24/2010
TIC: unknown (21.28)	12	0	JN	ppbV	1	3/24/2010
TIC: unknown (21.46)	6.6	0	JN	ppbV	1	3/24/2010
TIC: unknown (3.92)	13	0	JN	ppbV	1	3/24/2010

NOTES:
TPH approximately 9280ppbV and/or 33254ugm3

Centek Laboratories

Analytical Report

Date: *11-Apr-10*

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-5-032010
Lab Order:	C1003049	**Tag Number:**	18
Project:	Kingston ,NY	**Collection Date:**	3/20/2010
Lab ID:	C1003049-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed

Qualifiers:					
	**	Reporting Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories

Analytical Report

Date: *11-Apr-10*

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-1-031710
Lab Order:	C1003049	**Tag Number:**	11
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
1,1,1-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 35	35		ug/m3	1	3/24/2010
1,1,2-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,1-Dichloroethene	< 20	20		ug/m3	1	3/24/2010
1,2,4-Trichlorobenzene	< 38	38		ug/m3	1	3/24/2010
1,2,4-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,2-Dibromoethane	< 39	39		ug/m3	1	3/24/2010
1,2-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,2-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,2-Dichloropropane	< 23	23		ug/m3	1	3/24/2010
1,3,5-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,3-butadiene	< 11	11		ug/m3	1	3/24/2010
1,3-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dioxane	< 37	37		ug/m3	1	3/24/2010
2,2,4-trimethylpentane	< 24	24		ug/m3	1	3/24/2010
4-ethyltoluene	< 25	25		ug/m3	1	3/24/2010
Acetone	970	770		ug/m3	32	3/25/2010 6:20:00 PM
Allyl chloride	< 16	16		ug/m3	1	3/24/2010
Benzene	< 16	16		ug/m3	1	3/24/2010
Benzyl chloride	< 29	29		ug/m3	1	3/24/2010
Bromodichloromethane	< 34	34		ug/m3	1	3/24/2010
Bromoform	< 53	53		ug/m3	1	3/24/2010
Bromomethane	< 20	20		ug/m3	1	3/24/2010
Carbon disulfide	< 16	16		ug/m3	1	3/24/2010
Carbon tetrachloride	< 32	32		ug/m3	1	3/24/2010
Chlorobenzene	< 23	23		ug/m3	1	3/24/2010
Chloroethane	< 13	13		ug/m3	1	3/24/2010
Chloroform	220	25		ug/m3	1	3/24/2010
Chloromethane	< 10	10		ug/m3	1	3/24/2010
cis-1,2-Dichloroethene	2600	200		ug/m3	10	3/25/2010 12:06:00 AM
cis-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Cyclohexane	< 17	17		ug/m3	1	3/24/2010
Dibromochloromethane	< 43	43		ug/m3	1	3/24/2010
Ethyl acetate	< 37	37		ug/m3	1	3/24/2010
Ethylbenzene	< 22	22		ug/m3	1	3/24/2010
Freon 11	< 29	29		ug/m3	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-1-031710
Lab Order:	C1003049	**Tag Number:**	11
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Freon 113	< 39	39		ug/m3	1	3/24/2010
Freon 114	< 36	36		ug/m3	1	3/24/2010
Freon 12	< 25	25		ug/m3	1	3/24/2010
Heptane	< 21	21		ug/m3	1	3/24/2010
Hexachloro-1,3-butadiene	< 54	54		ug/m3	1	3/24/2010
Hexane	< 18	18		ug/m3	1	3/24/2010
Isopropyl alcohol	< 12	12		ug/m3	1	3/24/2010
m&p-Xylene	23	44	J	ug/m3	1	3/24/2010
Methyl Butyl Ketone	< 42	42		ug/m3	1	3/24/2010
Methyl Ethyl Ketone	3700	960		ug/m3	32	3/25/2010 6:20:00 PM
Methyl Isobutyl Ketone	21	42	J	ug/m3	1	3/24/2010
Methyl tert-butyl ether	< 18	18		ug/m3	1	3/24/2010
Methylene chloride	< 18	18		ug/m3	1	3/24/2010
o-Xylene	7.2	22	J	ug/m3	1	3/24/2010
Propylene	< 8.7	8.7		ug/m3	1	3/24/2010
Styrene	< 22	22		ug/m3	1	3/24/2010
Tetrachloroethylene	25000	5500		ug/m3	160	3/25/2010 5:50:00 PM
Tetrahydrofuran	7500	480		ug/m3	32	3/25/2010 6:20:00 PM
Toluene	8.4	19	J	ug/m3	1	3/24/2010
trans-1,2-Dichloroethene	52	20		ug/m3	1	3/24/2010
trans-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Trichloroethene	37000	4400		ug/m3	160	3/25/2010 5:50:00 PM
Vinyl acetate	< 18	18		ug/m3	1	3/24/2010
Vinyl Bromide	< 22	22		ug/m3	1	3/24/2010
Vinyl chloride	< 13	13		ug/m3	1	3/24/2010

NOTES:
TPH approximately 16280ppbV and/or 58318ugm3

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-4A-031710
Lab Order:	C1003049	**Tag Number:**	77
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
1,1,1-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 35	35		ug/m3	1	3/24/2010
1,1,2-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,1-Dichloroethene	< 20	20		ug/m3	1	3/24/2010
1,2,4-Trichlorobenzene	< 38	38		ug/m3	1	3/24/2010
1,2,4-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,2-Dibromoethane	< 39	39		ug/m3	1	3/24/2010
1,2-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,2-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,2-Dichloropropane	< 23	23		ug/m3	1	3/24/2010
1,3,5-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,3-butadiene	< 11	11		ug/m3	1	3/24/2010
1,3-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dioxane	< 37	37		ug/m3	1	3/24/2010
2,2,4-trimethylpentane	< 24	24		ug/m3	1	3/24/2010
4-ethyltoluene	< 25	25		ug/m3	1	3/24/2010
Acetone	2000	240		ug/m3	10	3/25/2010 1:11:00 AM
Allyl chloride	< 16	16		ug/m3	1	3/24/2010
Benzene	< 16	16		ug/m3	1	3/24/2010
Benzyl chloride	< 29	29		ug/m3	1	3/24/2010
Bromodichloromethane	< 34	34		ug/m3	1	3/24/2010
Bromoform	< 53	53		ug/m3	1	3/24/2010
Bromomethane	< 20	20		ug/m3	1	3/24/2010
Carbon disulfide	< 16	16		ug/m3	1	3/24/2010
Carbon tetrachloride	< 32	32		ug/m3	1	3/24/2010
Chlorobenzene	< 23	23		ug/m3	1	3/24/2010
Chloroethane	< 13	13		ug/m3	1	3/24/2010
Chloroform	140	25		ug/m3	1	3/24/2010
Chloromethane	< 10	10		ug/m3	1	3/24/2010
cis-1,2-Dichloroethene	2300	200		ug/m3	10	3/25/2010 1:11:00 AM
cis-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Cyclohexane	< 17	17		ug/m3	1	3/24/2010
Dibromochloromethane	< 43	43		ug/m3	1	3/24/2010
Ethyl acetate	< 37	37		ug/m3	1	3/24/2010
Ethylbenzene	< 22	22		ug/m3	1	3/24/2010
Freon 11	< 29	29		ug/m3	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-4A-031710
Lab Order:	C1003049	**Tag Number:**	77
Project:	Kingston ,NY	**Collection Date:**	3/17/2010
Lab ID:	C1003049-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				**Analyst: LL**
Freon 113	< 39	39		ug/m3	1	3/24/2010
Freon 114	< 36	36		ug/m3	1	3/24/2010
Freon 12	< 25	25		ug/m3	1	3/24/2010
Heptane	< 21	21		ug/m3	1	3/24/2010
Hexachloro-1,3-butadiene	< 54	54		ug/m3	1	3/24/2010
Hexane	< 18	18		ug/m3	1	3/24/2010
Isopropyl alcohol	< 12	12		ug/m3	1	3/24/2010
m&p-Xylene	22	44	J	ug/m3	1	3/24/2010
Methyl Butyl Ketone	< 42	42		ug/m3	1	3/24/2010
Methyl Ethyl Ketone	2200	960		ug/m3	32	3/25/2010 7:22:00 PM
Methyl Isobutyl Ketone	19	42	J	ug/m3	1	3/24/2010
Methyl tert-butyl ether	< 18	18		ug/m3	1	3/24/2010
Methylene chloride	< 18	18		ug/m3	1	3/24/2010
o-Xylene	7.3	22	J	ug/m3	1	3/24/2010
Propylene	< 8.7	8.7		ug/m3	1	3/24/2010
Styrene	< 22	22		ug/m3	1	3/24/2010
Tetrachloroethylene	19000	1100		ug/m3	32	3/25/2010 7:22:00 PM
Tetrahydrofuran	4800	480		ug/m3	32	3/25/2010 7:22:00 PM
Toluene	7.6	19	J	ug/m3	1	3/24/2010
trans-1,2-Dichloroethene	43	20		ug/m3	1	3/24/2010
trans-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Trichloroethene	23000	4400		ug/m3	160	3/25/2010 6:51:00 PM
Vinyl acetate	< 18	18		ug/m3	1	3/24/2010
Vinyl Bromide	< 22	22		ug/m3	1	3/24/2010
Vinyl chloride	< 13	13		ug/m3	1	3/24/2010

NOTES:
TPH approximately 12100ppbV and/or 43345ugm3

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-5-031810
Lab Order:	C1003049	**Tag Number:**	74
Project:	Kingston ,NY	**Collection Date:**	3/18/2010
Lab ID:	C1003049-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
1,1,1-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 35	35		ug/m3	1	3/24/2010
1,1,2-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,1-Dichloroethene	< 20	20		ug/m3	1	3/24/2010
1,2,4-Trichlorobenzene	< 38	38		ug/m3	1	3/24/2010
1,2,4-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,2-Dibromoethane	< 39	39		ug/m3	1	3/24/2010
1,2-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,2-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,2-Dichloropropane	< 23	23		ug/m3	1	3/24/2010
1,3,5-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,3-butadiene	< 11	11		ug/m3	1	3/24/2010
1,3-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dioxane	< 37	37		ug/m3	1	3/24/2010
2,2,4-trimethylpentane	< 24	24		ug/m3	1	3/24/2010
4-ethyltoluene	< 25	25		ug/m3	1	3/24/2010
Acetone	990	240		ug/m3	10	3/25/2010 2:16:00 AM
Allyl chloride	< 16	16		ug/m3	1	3/24/2010
Benzene	< 16	16		ug/m3	1	3/24/2010
Benzyl chloride	< 29	29		ug/m3	1	3/24/2010
Bromodichloromethane	< 34	34		ug/m3	1	3/24/2010
Bromoform	< 53	53		ug/m3	1	3/24/2010
Bromomethane	< 20	20		ug/m3	1	3/24/2010
Carbon disulfide	< 16	16		ug/m3	1	3/24/2010
Carbon tetrachloride	< 32	32		ug/m3	1	3/24/2010
Chlorobenzene	< 23	23		ug/m3	1	3/24/2010
Chloroethane	< 13	13		ug/m3	1	3/24/2010
Chloroform	110	25		ug/m3	1	3/24/2010
Chloromethane	< 10	10		ug/m3	1	3/24/2010
cis-1,2-Dichloroethene	1900	200		ug/m3	10	3/25/2010 2:16:00 AM
cis-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Cyclohexane	< 17	17		ug/m3	1	3/24/2010
Dibromochloromethane	< 43	43		ug/m3	1	3/24/2010
Ethyl acetate	< 37	37		ug/m3	1	3/24/2010
Ethylbenzene	< 22	22		ug/m3	1	3/24/2010
Freon 11	< 29	29		ug/m3	1	3/24/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	SVE-5-031810
Lab Order:	C1003049	**Tag Number:**	74
Project:	Kingston ,NY	**Collection Date:**	3/18/2010
Lab ID:	C1003049-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Freon 113	< 39	39		ug/m3	1	3/24/2010
Freon 114	< 36	36		ug/m3	1	3/24/2010
Freon 12	< 25	25		ug/m3	1	3/24/2010
Heptane	< 21	21		ug/m3	1	3/24/2010
Hexachloro-1,3-butadiene	< 54	54		ug/m3	1	3/24/2010
Hexane	< 18	18		ug/m3	1	3/24/2010
Isopropyl alcohol	< 12	12		ug/m3	1	3/24/2010
m&p-Xylene	23	44	J	ug/m3	1	3/24/2010
Methyl Butyl Ketone	< 42	42		ug/m3	1	3/24/2010
Methyl Ethyl Ketone	1900	960		ug/m3	32	3/25/2010 8:24:00 PM
Methyl Isobutyl Ketone	19	42	J	ug/m3	1	3/24/2010
Methyl tert-butyl ether	< 18	18		ug/m3	1	3/24/2010
Methylene chloride	< 18	18		ug/m3	1	3/24/2010
o-Xylene	7.8	22	J	ug/m3	1	3/24/2010
Propylene	< 8.7	8.7		ug/m3	1	3/24/2010
Styrene	< 22	22		ug/m3	1	3/24/2010
Tetrachloroethylene	25000	2800		ug/m3	80	3/25/2010 7:53:00 PM
Tetrahydrofuran	4000	480		ug/m3	32	3/25/2010 8:24:00 PM
Toluene	11	19	J	ug/m3	1	3/24/2010
trans-1,2-Dichloroethene	36	20		ug/m3	1	3/24/2010
trans-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Trichloroethene	30000	2200		ug/m3	80	3/25/2010 7:53:00 PM
Vinyl acetate	< 18	18		ug/m3	1	3/24/2010
Vinyl Bromide	< 22	22		ug/m3	1	3/24/2010
Vinyl chloride	< 13	13		ug/m3	1	3/24/2010

NOTES:
TPH approximately 13200ppbV and/or 47285ugm3

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-2-031910
Lab Order:	C1003049	**Tag Number:**	25
Project:	Kingston ,NY	**Collection Date:**	3/19/2010
Lab ID:	C1003049-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
1,1,1-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 35	35		ug/m3	1	3/24/2010
1,1,2-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,1-Dichloroethene	< 20	20		ug/m3	1	3/24/2010
1,2,4-Trichlorobenzene	< 38	38		ug/m3	1	3/24/2010
1,2,4-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,2-Dibromoethane	< 39	39		ug/m3	1	3/24/2010
1,2-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,2-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,2-Dichloropropane	< 23	23		ug/m3	1	3/24/2010
1,3,5-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,3-butadiene	< 11	11		ug/m3	1	3/24/2010
1,3-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dioxane	< 37	37		ug/m3	1	3/24/2010
2,2,4-trimethylpentane	< 24	24		ug/m3	1	3/24/2010
4-ethyltoluene	< 25	25		ug/m3	1	3/24/2010
Acetone	620	240		ug/m3	10	3/25/2010 3:21:00 AM
Allyl chloride	< 16	16		ug/m3	1	3/24/2010
Benzene	< 16	16		ug/m3	1	3/24/2010
Benzyl chloride	< 29	29		ug/m3	1	3/24/2010
Bromodichloromethane	< 34	34		ug/m3	1	3/24/2010
Bromoform	< 53	53		ug/m3	1	3/24/2010
Bromomethane	< 20	20		ug/m3	1	3/24/2010
Carbon disulfide	< 16	16		ug/m3	1	3/24/2010
Carbon tetrachloride	< 32	32		ug/m3	1	3/24/2010
Chlorobenzene	< 23	23		ug/m3	1	3/24/2010
Chloroethane	< 13	13		ug/m3	1	3/24/2010
Chloroform	130	25		ug/m3	1	3/24/2010
Chloromethane	11	10		ug/m3	1	3/24/2010
cis-1,2-Dichloroethene	2300	200		ug/m3	10	3/25/2010 3:21:00 AM
cis-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Cyclohexane	< 17	17		ug/m3	1	3/24/2010
Dibromochloromethane	< 43	43		ug/m3	1	3/24/2010
Ethyl acetate	< 37	37		ug/m3	1	3/24/2010
Ethylbenzene	< 22	22		ug/m3	1	3/24/2010
Freon 11	< 29	29		ug/m3	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-2-031910
Lab Order:	C1003049	**Tag Number:**	25
Project:	Kingston ,NY	**Collection Date:**	3/19/2010
Lab ID:	C1003049-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Freon 113	< 39	39		ug/m3	1	3/24/2010
Freon 114	< 36	36		ug/m3	1	3/24/2010
Freon 12	< 25	25		ug/m3	1	3/24/2010
Heptane	< 21	21		ug/m3	1	3/24/2010
Hexachloro-1,3-butadiene	< 54	54		ug/m3	1	3/24/2010
Hexane	< 18	18		ug/m3	1	3/24/2010
Isopropyl alcohol	< 12	12		ug/m3	1	3/24/2010
m&p-Xylene	11	44	J	ug/m3	1	3/24/2010
Methyl Butyl Ketone	< 42	42		ug/m3	1	3/24/2010
Methyl Ethyl Ketone	1800	300		ug/m3	10	3/25/2010 3:21:00 AM
Methyl Isobutyl Ketone	7.8	42	J	ug/m3	1	3/24/2010
Methyl tert-butyl ether	< 18	18		ug/m3	1	3/24/2010
Methylene chloride	< 18	18		ug/m3	1	3/24/2010
o-Xylene	< 22	22		ug/m3	1	3/24/2010
Propylene	< 8.7	8.7		ug/m3	1	3/24/2010
Styrene	< 22	22		ug/m3	1	3/24/2010
Tetrachloroethylene	30000	2800		ug/m3	80	3/25/2010 8:55:00 PM
Tetrahydrofuran	2000	480		ug/m3	32	3/25/2010 9:26:00 PM
Toluene	10	19	J	ug/m3	1	3/24/2010
trans-1,2-Dichloroethene	45	20		ug/m3	1	3/24/2010
trans-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Trichloroethene	35000	2200		ug/m3	80	3/25/2010 8:55:00 PM
Vinyl acetate	< 18	18		ug/m3	1	3/24/2010
Vinyl Bromide	< 22	22		ug/m3	1	3/24/2010
Vinyl chloride	< 13	13		ug/m3	1	3/24/2010

NOTES:
TPH approximately 14130ppbV and/or 50617ugm3

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-5-032010
Lab Order:	C1003049	**Tag Number:**	18
Project:	Kingston ,NY	**Collection Date:**	3/20/2010
Lab ID:	C1003049-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		TO-15				Analyst: LL
1,1,1-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1,2,2-Tetrachloroethane	< 35	35		ug/m3	1	3/24/2010
1,1,2-Trichloroethane	< 28	28		ug/m3	1	3/24/2010
1,1-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,1-Dichloroethene	< 20	20		ug/m3	1	3/24/2010
1,2,4-Trichlorobenzene	< 38	38		ug/m3	1	3/24/2010
1,2,4-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,2-Dibromoethane	< 39	39		ug/m3	1	3/24/2010
1,2-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,2-Dichloroethane	< 21	21		ug/m3	1	3/24/2010
1,2-Dichloropropane	< 23	23		ug/m3	1	3/24/2010
1,3,5-Trimethylbenzene	< 25	25		ug/m3	1	3/24/2010
1,3-butadiene	< 11	11		ug/m3	1	3/24/2010
1,3-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dichlorobenzene	< 31	31		ug/m3	1	3/24/2010
1,4-Dioxane	< 37	37		ug/m3	1	3/24/2010
2,2,4-trimethylpentane	< 24	24		ug/m3	1	3/24/2010
4-ethyltoluene	< 25	25		ug/m3	1	3/24/2010
Acetone	380	240		ug/m3	10	3/25/2010 4:26:00 AM
Allyl chloride	< 16	16		ug/m3	1	3/24/2010
Benzene	< 16	16		ug/m3	1	3/24/2010
Benzyl chloride	< 29	29		ug/m3	1	3/24/2010
Bromodichloromethane	< 34	34		ug/m3	1	3/24/2010
Bromoform	< 53	53		ug/m3	1	3/24/2010
Bromomethane	< 20	20		ug/m3	1	3/24/2010
Carbon disulfide	< 16	16		ug/m3	1	3/24/2010
Carbon tetrachloride	< 32	32		ug/m3	1	3/24/2010
Chlorobenzene	< 23	23		ug/m3	1	3/24/2010
Chloroethane	< 13	13		ug/m3	1	3/24/2010
Chloroform	68	25		ug/m3	1	3/24/2010
Chloromethane	< 10	10		ug/m3	1	3/24/2010
cis-1,2-Dichloroethene	1500	200		ug/m3	10	3/25/2010 4:26:00 AM
cis-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Cyclohexane	< 17	17		ug/m3	1	3/24/2010
Dibromochloromethane	< 43	43		ug/m3	1	3/24/2010
Ethyl acetate	< 37	37		ug/m3	1	3/24/2010
Ethylbenzene	< 22	22		ug/m3	1	3/24/2010
Freon 11	< 29	29		ug/m3	1	3/24/2010

CLIENT:	WSP Environment and Energy	**Client Sample ID:**	AS/SVE-5-032010
Lab Order:	C1003049	**Tag Number:**	18
Project:	Kingston ,NY	**Collection Date:**	3/20/2010
Lab ID:	C1003049-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
5PPB BY METHOD TO15		**TO-15**				Analyst: LL
Freon 113	< 39	39		ug/m3	1	3/24/2010
Freon 114	< 36	36		ug/m3	1	3/24/2010
Freon 12	< 25	25		ug/m3	1	3/24/2010
Heptane	5.0	21	J	ug/m3	1	3/24/2010
Hexachloro-1,3-butadiene	< 54	54		ug/m3	1	3/24/2010
Hexane	< 18	18		ug/m3	1	3/24/2010
Isopropyl alcohol	20	12		ug/m3	1	3/24/2010
m&p-Xylene	13	44	J	ug/m3	1	3/24/2010
Methyl Butyl Ketone	< 42	42		ug/m3	1	3/24/2010
Methyl Ethyl Ketone	1100	300		ug/m3	10	3/25/2010 4:26:00 AM
Methyl Isobutyl Ketone	8.3	42	J	ug/m3	1	3/24/2010
Methyl tert-butyl ether	< 18	18		ug/m3	1	3/24/2010
Methylene chloride	< 18	18		ug/m3	1	3/24/2010
o-Xylene	< 22	22		ug/m3	1	3/24/2010
Propylene	< 8.7	8.7		ug/m3	1	3/24/2010
Styrene	< 22	22		ug/m3	1	3/24/2010
Tetrachloroethylene	18000	1100		ug/m3	32	3/25/2010 10:29:00 PM
Tetrahydrofuran	2100	150		ug/m3	10	3/25/2010 4:26:00 AM
Toluene	10	19	J	ug/m3	1	3/24/2010
trans-1,2-Dichloroethene	25	20		ug/m3	1	3/24/2010
trans-1,3-Dichloropropene	< 23	23		ug/m3	1	3/24/2010
Trichloroethene	22000	2200		ug/m3	80	3/25/2010 9:57:00 PM
Vinyl acetate	< 18	18		ug/m3	1	3/24/2010
Vinyl Bromide	< 22	22		ug/m3	1	3/24/2010
Vinyl chloride	< 13	13		ug/m3	1	3/24/2010

NOTES:
TPH approximately 9280ppbV and/or 33254ugm3

Client Name: WSP Environment & Energy
Contact: Scott Petersen
Address: 5 Sullivan Street
Cazenovia, NY 13035

Lab Proj #: P1003293
Report Date: 03/30/10
Client Proj Name: Federal Mogul
Client Proj #: 138008.20

Laboratory Results

Total pages in data package: 8

Lab Sample #	Client Sample ID
P1003293-01	SVE-2-031710
P1003293-02	SVE-3-031710
P1003293-03	SVE-4B-031710
P1003293-04	AS/SVE-1-031910
P1003293-05	AS/SVE-3-031910
P1003293-06	AS/SVE-4-032010

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not.

Approved By: Debbie Hallo (AH) ***Date:*** 3·30·10

Project Manager: Debbie Hallo

The analytical results reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

As a valued client we would appreciate your comments on our service.
Please call customer service at (412)826-5245 or email customerservice@microseeps.com.

Case Narrative:

Client Name: WSP Environment & Energy
Contact: Scott Petersen
Address: 5 Sullivan Street
Cazenovia, NY 13035

Lab Proj #: P1003293
Report Date: 03/30/10
Client Proj Name: Federal Mogul
Client Proj #: 138008.20

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
SVE-2-031710	Vapor	P1003293-01	17 Mar. 10 9:54	23 Mar. 10 14:40

	Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
	RiskAnalysis						
N	1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N	1,1,2,2-Tetrachloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N	1,1,2-Trichloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N	1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N	1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N	1,2,4-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	1,2-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	1,2-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N	1,2-Dichloropropane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N	1,3,5-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	1,3-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	1,4-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	2-Butanone	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N	2-Hexanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N	4-Methyl-2-Pentanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N	Acetone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N	Benzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	Bromodichloromethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N	Bromoform	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N	Bromomethane/Chloroethane	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N	Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N	Chlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	Chlorodibromomethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N	Chloroform	0.0596	0.0050	PPMV	AM4.02	3/26/10	mm
N	Chloromethane	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N	cis-1,2-Dichloroethene	0.5468	0.0200	PPMV	AM4.02	3/26/10	mm
N	cis-1,3-Dichloropropene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N	Ethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	Isopropylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	m & p-Xylene	<0.2000	0.2000	PPMV	AM4.02	3/26/10	mm
N	Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N	Methyl-tert-butyl ether	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	Naphthalene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	o-Xylene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	Styrene	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N	Tetrachloroethene	2.8043	0.0100	PPMV	AM4.02	3/26/10	mm
N	Toluene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N	Total TPH C5-C10	3.8000	0.5000	PPMV	AM4.02	3/26/10	mm
N	trans-1,2-Dichloroethene	0.0153	0.0100	PPMV	AM4.02	3/26/10	mm
N	trans-1,3-Dichloropropene	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N	Trichloroethene	7.6480	0.0100	PPMV	AM4.02	3/26/10	mm
N	Trichlorofluoromethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N	Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm

N - NELAC certified analysis

Client Name: WSP Environment & Energy
Contact: Scott Petersen
Address: 5 Sullivan Street
Cazenovia, NY 13035

Lab Proj #: P1003293
Report Date: 03/30/10
Client Proj Name: Federal Mogul
Client Proj #: 138008.20

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
SVE-3-031710	Vapor	P1003293-02	17 Mar. 10 12:54	23 Mar. 10 14:40

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N 1,1,2,2-Tetrachloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1,2-Trichloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,2,4-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloropropane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,3,5-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,3-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,4-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 2-Butanone	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N 2-Hexanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N 4-Methyl-2-Pentanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Acetone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Benzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Bromodichloromethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromoform	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromomethane/Chloroethane	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Chlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Chlorodibromomethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Chloroform	0.0499	0.0050	PPMV	AM4.02	3/26/10	mm
N Chloromethane	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N cis-1,2-Dichloroethene	0.4893	0.0200	PPMV	AM4.02	3/26/10	mm
N cis-1,3-Dichloropropene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Ethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Isopropylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N m & p-Xylene	<0.2000	0.2000	PPMV	AM4.02	3/26/10	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N Methyl-tert-butyl ether	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Naphthalene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N o-Xylene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Styrene	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N Tetrachloroethene	2.0167	0.0100	PPMV	AM4.02	3/26/10	mm
N Toluene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Total TPH C5-C10	2.9800	0.5000	PPMV	AM4.02	3/26/10	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N trans-1,3-Dichloropropene	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N Trichloroethene	5.8486	0.0100	PPMV	AM4.02	3/26/10	mm
N Trichlorofluoromethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm

N - NELAC certified analysis

Client Name: WSP Environment & Energy
Contact: Scott Petersen
Address: 5 Sullivan Street
Cazenovia, NY 13035

Lab Proj #: P1003293
Report Date: 03/30/10
Client Proj Name: Federal Mogul
Client Proj #: 138008.20

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
SVE-4B-031710	Vapor	P1003293-03	17 Mar. 10 18:55	23 Mar. 10 14:40

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N 1,1,2,2-Tetrachloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1,2-Trichloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,2,4-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloropropane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,3,5-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,3-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,4-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 2-Butanone	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N 2-Hexanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N 4-Methyl-2-Pentanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Acetone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Benzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Bromodichloromethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromoform	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromomethane/Chloroethane	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Chlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Chlorodibromomethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Chloroform	0.0360	0.0050	PPMV	AM4.02	3/26/10	mm
N Chloromethane	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N cis-1,2-Dichloroethene	0.3776	0.0200	PPMV	AM4.02	3/26/10	mm
N cis-1,3-Dichloropropene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Ethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Isopropylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N m & p-Xylene	<0.2000	0.2000	PPMV	AM4.02	3/26/10	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N Methyl-tert-butyl ether	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Naphthalene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N o-Xylene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Styrene	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N Tetrachloroethene	1.4179	0.0100	PPMV	AM4.02	3/26/10	mm
N Toluene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Total TPH C5-C10	2.0500	0.5000	PPMV	AM4.02	3/26/10	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N trans-1,3-Dichloropropene	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N Trichloroethene	3.9749	0.0100	PPMV	AM4.02	3/26/10	mm
N Trichlorofluoromethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm

N - NELAC certified analysis

Client Name: WSP Environment & Energy
Contact: Scott Petersen
Address: 5 Sullivan Street
Cazenovia, NY 13035

Lab Proj #: P1003293
Report Date: 03/30/10
Client Proj Name: Federal Mogul
Client Proj #: 138008.20

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
AS/SVE-1-031910	Vapor	P1003293-04	19 Mar. 10 13:30	23 Mar. 10 14:40

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N 1,1,2,2-Tetrachloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1,2-Trichloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,2,4-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloropropane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,3,5-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,3-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,4-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 2-Butanone	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N 2-Hexanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N 4-Methyl-2-Pentanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Acetone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Benzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Bromodichloromethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromoform	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromomethane/Chloroethane	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Chlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Chlorodibromomethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Chloroform	0.0447	0.0050	PPMV	AM4.02	3/26/10	mm
N Chloromethane	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N cis-1,2-Dichloroethene	0.5172	0.0200	PPMV	AM4.02	3/26/10	mm
N cis-1,3-Dichloropropene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Ethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Isopropylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N m & p-Xylene	<0.2000	0.2000	PPMV	AM4.02	3/26/10	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N Methyl-tert-butyl ether	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Naphthalene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N o-Xylene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Styrene	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N Tetrachloroethene	2.8538	0.0100	PPMV	AM4.02	3/26/10	mm
N Toluene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Total TPH C5-C10	3.1500	0.5000	PPMV	AM4.02	3/26/10	mm
N trans-1,2-Dichloroethene	0.0107	0.0100	PPMV	AM4.02	3/26/10	mm
N trans-1,3-Dichloropropene	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N Trichloroethene	5.7757	0.0100	PPMV	AM4.02	3/26/10	mm
N Trichlorofluoromethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm

N - NELAC certified analysis

Client Name: WSP Environment & Energy
Contact: Scott Petersen
Address: 5 Sullivan Street
Cazenovia, NY 13035

Lab Proj #: P1003293
Report Date: 03/30/10
Client Proj Name: Federal Mogul
Client Proj #: 138008.20

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
AS/SVE-3-031910	Vapor	P1003293-05	19 Mar. 10 18:25	23 Mar. 10 14:40

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N 1,1,2,2-Tetrachloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1,2-Trichloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,2,4-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloropropane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,3,5-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,3-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,4-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 2-Butanone	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N 2-Hexanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N 4-Methyl-2-Pentanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Acetone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Benzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Bromodichloromethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromoform	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromomethane/Chloroethane	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Chlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Chlorodibromomethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Chloroform	0.0318	0.0050	PPMV	AM4.02	3/26/10	mm
N Chloromethane	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N cis-1,2-Dichloroethene	0.4748	0.0200	PPMV	AM4.02	3/26/10	mm
N cis-1,3-Dichloropropene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Ethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Isopropylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N m & p-Xylene	<0.2000	0.2000	PPMV	AM4.02	3/26/10	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N Methyl-tert-butyl ether	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Naphthalene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N o-Xylene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Styrene	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N Tetrachloroethene	2.5171	0.0100	PPMV	AM4.02	3/26/10	mm
N Toluene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Total TPH C5-C10	2.8400	0.5000	PPMV	AM4.02	3/26/10	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N trans-1,3-Dichloropropene	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N Trichloroethene	4.8521	0.0100	PPMV	AM4.02	3/26/10	mm
N Trichlorofluoromethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm

N - NELAC certified analysis

Client Name: WSP Environment & Energy
Contact: Scott Petersen
Address: 5 Sullivan Street
Cazenovia, NY 13035

Lab Proj #: P1003293
Report Date: 03/30/10
Client Proj Name: Federal Mogul
Client Proj #: 138008.20

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
AS/SVE-4-032010	Vapor	P1003293-06	20 Mar. 10 8:25	23 Mar. 10 14:40

Analyte(s)	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis						
N 1,1,1-Trichloroethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N 1,1,2,2-Tetrachloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1,2-Trichloroethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,1-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N 1,2,4-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloroethane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,2-Dichloropropane	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N 1,3,5-Trimethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,3-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 1,4-Dichlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N 2-Butanone	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N 2-Hexanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N 4-Methyl-2-Pentanone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Acetone	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Benzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Bromodichloromethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromoform	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Bromomethane/Chloroethane	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm
N Carbon Tetrachloride	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Chlorobenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Chlorodibromomethane	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Chloroform	0.0227	0.0050	PPMV	AM4.02	3/26/10	mm
N Chloromethane	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N cis-1,2-Dichloroethene	0.3482	0.0200	PPMV	AM4.02	3/26/10	mm
N cis-1,3-Dichloropropene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N Ethylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Isopropylbenzene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N m & p-Xylene	<0.2000	0.2000	PPMV	AM4.02	3/26/10	mm
N Methylene Chloride	<2.0000	2.0000	PPMV	AM4.02	3/26/10	mm
N Methyl-tert-butyl ether	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Naphthalene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N o-Xylene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Styrene	<0.5000	0.5000	PPMV	AM4.02	3/26/10	mm
N Tetrachloroethene	1.2846	0.0100	PPMV	AM4.02	3/26/10	mm
N Toluene	<0.1000	0.1000	PPMV	AM4.02	3/26/10	mm
N Total TPH C5-C10	1.7400	0.5000	PPMV	AM4.02	3/26/10	mm
N trans-1,2-Dichloroethene	<0.0100	0.0100	PPMV	AM4.02	3/26/10	mm
N trans-1,3-Dichloropropene	<0.0200	0.0200	PPMV	AM4.02	3/26/10	mm
N Trichloroethene	3.2869	0.0100	PPMV	AM4.02	3/26/10	mm
N Trichlorofluoromethane	<0.0050	0.0050	PPMV	AM4.02	3/26/10	mm
N Vinyl Chloride	<1.0000	1.0000	PPMV	AM4.02	3/26/10	mm

N - NELAC certified analysis

CHAIN OF CUSTODY RECORD

P1003293

Page 1 of 1

Project Number:	Site and Location:
138008.20	Federal Mogul - Kingston, NY
Contact Name:	**Contact Email:**
Scott Petersen	scott.petersen@wspgroup.com
Sampler's Name:	**Sampler's Signature:**
Scott Petersen	

Matrices:
S = Soil:
Aq = Water
A = Air: Bu = Bulk
W = Wipe
Bi = Biota:
OW = Oily Waste:
O = Other

Requested Analyses

N° 01066

Sample Identification:	Depth	Date	Time	Matrix	Number of Containers	TO-15 (VOCs)	Remarks
SVE-2-031710	—	3/17/10	0954	A	2	X	
SVE-3-031710	—	3/17/10	1254	A	2	X	
SVE-4B-031710	—	3/17/10	1855	A	2	X	
AS/SVE-1-031910	—	3/19/10	1330	A	2	X	
AS/SVE-3-031910	—	3/19/10	1825	A	2	X	
AS/SVE-4-032010	—	3/20/10	0825	A	2	X	

3/22/10

3/22/10

Relinquished by *(Signature)*:	3/22/10 1200 Date | Time	Received by *(Signature)*:	Laboratory Name: Microseeps
Relinquished by *(Signature)*:	Date | Time	Received by *(Signature)*:	Laboratory Location: Pittsburgh, PA
Turn-Around Time: Standard		Tracking Number: 8123 10 NW	Custody Seal Numbers:
			Method of Shipment: FedEx

WSP
WSP Environment & Energy

- ☐ Reston Office: 11190 Sunrise Valley Dr., #300, Reston, VA 20191 / Tel: 703-709-6500
- ☐ Pittsburgh Office: 750 Holiday Dr., #410, Pittsburgh, PA 15220 / Tel: 412-604-1040
- ☐ San Jose Office: 2025 Gateway Place, #435, San Jose, CA 95110 / Tel: 408-453-6100
- ☐ New Jersey Office: 334 Elizabeth Ave., Somerset, NJ 08873 / Tel: 732-564-0888
- ☐ Denver Office: 4600 South Ulster, #930, Denver, CO 80237 / Tel: 303-850-9200
- ☐ Minneapolis Office: 123 North 3rd St., #808, Minneapolis, MN 55401 / Tel: 612-343-0510
- ☐ Boxborough Office: 1740 Massachusetts Ave., Boxborough, MA 01719 / Tel: 978-635-9600
- (A) Cazenovia Office: 5 Sullivan St., Cazenovia, NY 13035 / Tel: 315-655-3900

Appendix C – Aqueous Sample Analytical Report

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

March 30, 2010

Mr. Scott Petersen
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Dear Mr. Petersen:
Enclosed are the analytical results for sample(s) received by the laboratory on March 16, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

cc: Mr. David Bouchard, WSP Environment & Energy

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Pennsylvania Certification IDs
1638 Roseytown Road Suites 2,3&4 Greensburg, PA 15601
Wyoming Certification #: 8TMS-Q
Wisconsin/PADEP Certification
West Virginia Certification #: 143
Washington Certification #: C1941
Virginia Certification #: 00112
Virgin Island/PADEP Certification
Utah/NELAC Certification #: ANTE
Texas/NELAC Certification #: T104704188-09 TX
Tennessee Certification #: TN2867
South Dakota Certification
Puerto Rico Certification #: PA01457
Pennsylvania/NELAC Certification #: 0065-282
Oregon/NELAC Certification #: PA200002
North Carolina Certification #: 42706
New York/NELAC Certification #: 10888
New Mexico Certification
New Jersey/NELAC Certification #: PA 051
New Hampshire/NELAC Certification #: 2976
Nevada Certification
Montana Certification #: Cert 0082
Missouri Certification #: 235
Michigan/PADEP Certification
Massachusetts Certification #: M-PA1457
Maryland Certification #: 308
Maine Certification #: PA0091
Louisiana/NELAC Certification #: LA080002
Louisiana/NELAC Certification #: 4086
Kentucky Certification #: 90133
Kansas/NELAC Certification #: E-10358
Iowa Certification #: 391
Indiana/PADEP Certification
Illinois/PADEP Certification
Idaho Certification
Hawaii/PADEP Certification
Guam/PADEP Certification
Georgia Certification #: 968
Florida/NELAC Certification #: E87683
Delaware Certification
Connecticut Certification #: PH 0694
Colorado Certification
California/NELAC Certification #: 04222CA
Arkansas Certification
Arizona Certification #: AZ0734
Alabama Certification #: 41590

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SAMPLE ANALYTE COUNT

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3024386001	**MP-1**	EPA 8260	JHC	46	PASI-PA
3024386002	**MP-2**	EPA 8260	JHC	46	PASI-PA
3024386003	**MP-3**	EPA 8260	JHC	46	PASI-PA
3024386004	**MP-4**	EPA 8260	JHC	46	PASI-PA
3024386005	**TB031410**	EPA 8260	JHC	46	PASI-PA

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PROJECT NARRATIVE

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Method: **EPA 8260**
Description: 8260 MSV
Client: WSP Environment & Energy - Cazenovia, NY
Date: March 30, 2010

General Information:
5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/5353

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

- LCS (Lab ID: 153036)
  - Bromomethane
  - Carbon disulfide
  - Chloroethane
  - Chloromethane
  - Vinyl chloride

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/5353

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 3024467001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 153037)
  - 1,1-Dichloroethene
  - Carbon disulfide
  - Chloroethane
  - Vinyl chloride

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PROJECT NARRATIVE

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Method: **EPA 8260**
Description: 8260 MSV
Client: WSP Environment & Energy - Cazenovia, NY
Date: March 30, 2010

QC Batch: MSV/5353

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 3024467001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MSD (Lab ID: 153038)
  - Carbon disulfide
  - Chloroethane
  - cis-1,3-Dichloropropene

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Sample: MP-1 **Lab ID: 3024386001** Collected: 03/14/10 17:13 Received: 03/16/10 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/25/10 13:38	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/10 13:38	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/25/10 13:38	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/10 13:38	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/10 13:38	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/25/10 13:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/25/10 13:38	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/25/10 13:38	75-15-0	
Carbon tetrachloride	**2.4**	ug/L	1.0	1		03/25/10 13:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/10 13:38	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/10 13:38	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/10 13:38	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/10 13:38	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/10 13:38	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:38	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/10 13:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/10 13:38	107-06-2	
1,2-Dichloroethene (Total)	**34.8**	ug/L	2.0	1		03/25/10 13:38	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/10 13:38	75-35-4	
cis-1,2-Dichloroethene	**34.8**	ug/L	1.0	1		03/25/10 13:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/10 13:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/10 13:38	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 13:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 13:38	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/25/10 13:38	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/25/10 13:38	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/25/10 13:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/25/10 13:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/10 13:38	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/25/10 13:38	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/10 13:38	79-34-5	
Tetrachloroethene	**362**	ug/L	1.0	1		03/25/10 13:38	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/10 13:38	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/10 13:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/10 13:38	79-00-5	
Trichloroethene	**496**	ug/L	1.0	1		03/25/10 13:38	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/25/10 13:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/25/10 13:38	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/10 13:38	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/25/10 13:38	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130	1		03/25/10 13:38	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		03/25/10 13:38	17060-07-0	
Toluene-d8 (S)	91	%	70-130	1		03/25/10 13:38	2037-26-5	

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Sample: MP-2 **Lab ID: 3024386002** Collected: 03/14/10 17:42 Received: 03/16/10 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/25/10 14:03	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/10 14:03	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/25/10 14:03	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/10 14:03	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/10 14:03	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/25/10 14:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/25/10 14:03	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/25/10 14:03	75-15-0	
Carbon tetrachloride	**3.3**	ug/L	1.0	1		03/25/10 14:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/10 14:03	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/10 14:03	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/10 14:03	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/10 14:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/10 14:03	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:03	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/10 14:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/10 14:03	107-06-2	
1,2-Dichloroethene (Total)	**760**	ug/L	20.0	10		03/26/10 16:48	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/10 14:03	75-35-4	
cis-1,2-Dichloroethene	**755**	ug/L	10.0	10		03/26/10 16:48	156-59-2	
trans-1,2-Dichloroethene	**5.3**	ug/L	1.0	1		03/25/10 14:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/10 14:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 14:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 14:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/25/10 14:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/25/10 14:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/25/10 14:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/25/10 14:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/10 14:03	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/25/10 14:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/10 14:03	79-34-5	
Tetrachloroethene	**1810**	ug/L	10.0	10		03/26/10 16:48	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/10 14:03	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/10 14:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/10 14:03	79-00-5	
Trichloroethene	**2090**	ug/L	10.0	10		03/26/10 16:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/25/10 14:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/25/10 14:03	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/10 14:03	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/25/10 14:03	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130	1		03/25/10 14:03	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130	1		03/25/10 14:03	17060-07-0	
Toluene-d8 (S)	90	%	70-130	1		03/25/10 14:03	2037-26-5	

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Sample: MP-3 **Lab ID: 3024386003** Collected: 03/14/10 18:08 Received: 03/16/10 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/25/10 14:29	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/10 14:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/25/10 14:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/10 14:29	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/10 14:29	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/25/10 14:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/25/10 14:29	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/25/10 14:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/10 14:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/10 14:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/10 14:29	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/10 14:29	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/10 14:29	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/10 14:29	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:29	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/10 14:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/10 14:29	107-06-2	
1,2-Dichloroethene (Total)	**629**	ug/L	20.0	10		03/26/10 17:14	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/10 14:29	75-35-4	
cis-1,2-Dichloroethene	**626**	ug/L	10.0	10		03/26/10 17:14	156-59-2	
trans-1,2-Dichloroethene	**3.4**	ug/L	1.0	1		03/25/10 14:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/10 14:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 14:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 14:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/25/10 14:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/25/10 14:29	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/25/10 14:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/25/10 14:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/10 14:29	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/25/10 14:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/10 14:29	79-34-5	
Tetrachloroethene	**2270**	ug/L	10.0	10		03/26/10 17:14	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/10 14:29	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/10 14:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/10 14:29	79-00-5	
Trichloroethene	**218**	ug/L	1.0	1		03/25/10 14:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/25/10 14:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/25/10 14:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/10 14:29	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/25/10 14:29	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130	1		03/25/10 14:29	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		03/25/10 14:29	17060-07-0	
Toluene-d8 (S)	91	%	70-130	1		03/25/10 14:29	2037-26-5	

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Sample: MP-4 **Lab ID: 3024386004** Collected: 03/14/10 18:40 Received: 03/16/10 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/25/10 14:55	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/10 14:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/25/10 14:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/10 14:55	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/10 14:55	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/25/10 14:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/25/10 14:55	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/25/10 14:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/10 14:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/10 14:55	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/10 14:55	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/10 14:55	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/10 14:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/10 14:55	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:55	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/10 14:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/10 14:55	107-06-2	
1,2-Dichloroethene (Total)	**134**	ug/L	2.0	1		03/25/10 14:55	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/10 14:55	75-35-4	
cis-1,2-Dichloroethene	**133**	ug/L	1.0	1		03/25/10 14:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/10 14:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/10 14:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 14:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 14:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/25/10 14:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/25/10 14:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/25/10 14:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/25/10 14:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/10 14:55	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/25/10 14:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/10 14:55	79-34-5	
Tetrachloroethene	**204**	ug/L	1.0	1		03/25/10 14:55	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/10 14:55	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/10 14:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/10 14:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/10 14:55	79-00-5	
Trichloroethene	**112**	ug/L	1.0	1		03/25/10 14:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/25/10 14:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/25/10 14:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/10 14:55	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/25/10 14:55	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130	1		03/25/10 14:55	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		03/25/10 14:55	17060-07-0	
Toluene-d8 (S)	95	%	70-130	1		03/25/10 14:55	2037-26-5	

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

Sample: TB031410 **Lab ID: 3024386005** Collected: 03/14/10 00:00 Received: 03/16/10 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/25/10 13:12	67-64-1	
Benzene	ND	ug/L	1.0	1		03/25/10 13:12	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/25/10 13:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/25/10 13:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/25/10 13:12	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/25/10 13:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/25/10 13:12	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/25/10 13:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/25/10 13:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/25/10 13:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/25/10 13:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/25/10 13:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/25/10 13:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/25/10 13:12	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:12	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/25/10 13:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/25/10 13:12	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	2.0	1		03/25/10 13:12	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/25/10 13:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/10 13:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/25/10 13:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/25/10 13:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 13:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/25/10 13:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/25/10 13:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/25/10 13:12	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/25/10 13:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/25/10 13:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/25/10 13:12	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/25/10 13:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/25/10 13:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		03/25/10 13:12	127-18-4	
Toluene	ND	ug/L	1.0	1		03/25/10 13:12	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/25/10 13:12	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/25/10 13:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/25/10 13:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/25/10 13:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/25/10 13:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/25/10 13:12	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/25/10 13:12	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/25/10 13:12	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130	1		03/25/10 13:12	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130	1		03/25/10 13:12	17060-07-0	
Toluene-d8 (S)	92	%	70-130	1		03/25/10 13:12	2037-26-5	

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QUALITY CONTROL DATA

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

QC Batch: MSV/5353 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 3024386001, 3024386002, 3024386003, 3024386004, 3024386005

METHOD BLANK: 153035 Matrix: Water
Associated Lab Samples: 3024386001, 3024386002, 3024386003, 3024386004, 3024386005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	03/25/10 10:12	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/25/10 10:12	
1,1,2-Trichloroethane	ug/L	ND	1.0	03/25/10 10:12	
1,1-Dichloroethane	ug/L	ND	1.0	03/25/10 10:12	
1,1-Dichloroethene	ug/L	ND	1.0	03/25/10 10:12	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	03/25/10 10:12	
1,2-Dichlorobenzene	ug/L	ND	1.0	03/25/10 10:12	
1,2-Dichloroethane	ug/L	ND	1.0	03/25/10 10:12	
1,2-Dichloropropane	ug/L	ND	1.0	03/25/10 10:12	
1,3-Dichlorobenzene	ug/L	ND	1.0	03/25/10 10:12	
1,4-Dichlorobenzene	ug/L	ND	1.0	03/25/10 10:12	
2-Butanone (MEK)	ug/L	ND	10.0	03/25/10 10:12	
2-Hexanone	ug/L	ND	10.0	03/25/10 10:12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	03/25/10 10:12	
Acetone	ug/L	ND	10.0	03/25/10 10:12	
Benzene	ug/L	ND	1.0	03/25/10 10:12	
Bromochloromethane	ug/L	ND	1.0	03/25/10 10:12	
Bromodichloromethane	ug/L	ND	1.0	03/25/10 10:12	
Bromoform	ug/L	ND	1.0	03/25/10 10:12	
Bromomethane	ug/L	ND	1.0	03/25/10 10:12	
Carbon disulfide	ug/L	ND	1.0	03/25/10 10:12	
Carbon tetrachloride	ug/L	ND	1.0	03/25/10 10:12	
Chlorobenzene	ug/L	ND	1.0	03/25/10 10:12	
Chloroethane	ug/L	ND	1.0	03/25/10 10:12	
Chloroform	ug/L	ND	1.0	03/25/10 10:12	
Chloromethane	ug/L	ND	1.0	03/25/10 10:12	
cis-1,2-Dichloroethene	ug/L	ND	1.0	03/25/10 10:12	
cis-1,3-Dichloropropene	ug/L	ND	1.0	03/25/10 10:12	
Dibromochloromethane	ug/L	ND	1.0	03/25/10 10:12	
Ethylbenzene	ug/L	ND	1.0	03/25/10 10:12	
m&p-Xylene	ug/L	ND	2.0	03/25/10 10:12	
Methyl-tert-butyl ether	ug/L	ND	1.0	03/25/10 10:12	
Methylene Chloride	ug/L	ND	1.0	03/25/10 10:12	
o-Xylene	ug/L	ND	1.0	03/25/10 10:12	
Styrene	ug/L	ND	1.0	03/25/10 10:12	
Tetrachloroethene	ug/L	ND	1.0	03/25/10 10:12	
Toluene	ug/L	ND	1.0	03/25/10 10:12	
trans-1,2-Dichloroethene	ug/L	ND	1.0	03/25/10 10:12	
trans-1,3-Dichloropropene	ug/L	ND	1.0	03/25/10 10:12	
Trichloroethene	ug/L	ND	1.0	03/25/10 10:12	
Vinyl chloride	ug/L	ND	1.0	03/25/10 10:12	
Xylene (Total)	ug/L	ND	3.0	03/25/10 10:12	
1,2-Dichloroethane-d4 (S)	%	101	70-130	03/25/10 10:12	

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QUALITY CONTROL DATA

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

METHOD BLANK: 153035 Matrix: Water

Associated Lab Samples: 3024386001, 3024386002, 3024386003, 3024386004, 3024386005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4-Bromofluorobenzene (S)	%	100	70-130	03/25/10 10:12	
Toluene-d8 (S)	%	93	70-130	03/25/10 10:12	

LABORATORY CONTROL SAMPLE: 153036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.9	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	17.2	86	70-130	
1,1,2-Trichloroethane	ug/L	20	17.7	88	70-130	
1,1-Dichloroethane	ug/L	20	18.3	91	70-130	
1,1-Dichloroethene	ug/L	20	15.7	78	70-130	
1,2,4-Trichlorobenzene	ug/L	20	19.6	98	70-130	
1,2-Dichlorobenzene	ug/L	20	18.9	95	70-130	
1,2-Dichloroethane	ug/L	20	16.8	84	70-130	
1,2-Dichloropropane	ug/L	20	17.8	89	70-130	
1,3-Dichlorobenzene	ug/L	20	19.0	95	70-130	
1,4-Dichlorobenzene	ug/L	20	19.0	95	70-130	
2-Butanone (MEK)	ug/L	20	17.9	90	70-130	
2-Hexanone	ug/L	20	17.5	87	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	20	18.1	91	70-130	
Acetone	ug/L	20	20.3	102	70-130	
Benzene	ug/L	20	17.7	89	70-130	
Bromochloromethane	ug/L	20	17.2	86	70-130	
Bromodichloromethane	ug/L	20	20.0	100	70-130	
Bromoform	ug/L	20	17.8	89	70-130	
Bromomethane	ug/L	20	29.2	146	70-130	L0
Carbon disulfide	ug/L	20	13.5	68	70-130	L0
Carbon tetrachloride	ug/L	20	18.2	91	70-130	
Chlorobenzene	ug/L	20	18.4	92	70-130	
Chloroethane	ug/L	20	8.4	42	70-130	L0
Chloroform	ug/L	20	18.5	93	70-130	
Chloromethane	ug/L	20	13.4	67	70-130	L0
cis-1,2-Dichloroethene	ug/L	20	18.1	91	70-130	
cis-1,3-Dichloropropene	ug/L	20	17.7	88	70-130	
Dibromochloromethane	ug/L	20	18.2	91	70-130	
Ethylbenzene	ug/L	20	18.5	92	70-130	
m&p-Xylene	ug/L	40	37.0	93	70-130	
Methyl-tert-butyl ether	ug/L	20	15.9	79	70-130	
Methylene Chloride	ug/L	20	17.2	86	70-130	
o-Xylene	ug/L	20	18.1	90	70-130	
Styrene	ug/L	20	17.8	89	70-130	
Tetrachloroethene	ug/L	20	18.7	94	70-130	
Toluene	ug/L	20	18.4	92	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.8	89	70-130	
trans-1,3-Dichloropropene	ug/L	20	17.7	89	70-130	

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QUALITY CONTROL DATA

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

LABORATORY CONTROL SAMPLE: 153036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	18.0	90	70-130	
Vinyl chloride	ug/L	20	12.7	64	70-130	L0
Xylene (Total)	ug/L	60	55.1	92	70-130	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			95	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153037 153038

Parameter	Units	3024467001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	17.7	18.6	89	93	70-130	5	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	14.5	14.4	72	72	70-130	.9	
1,1,2-Trichloroethane	ug/L	ND	20	20	15.0	15.5	75	77	70-130	3	
1,1-Dichloroethane	ug/L	ND	20	20	15.9	16.7	80	84	70-130	5	
1,1-Dichloroethene	ug/L	ND	20	20	13.6	14.4	68	72	70-130	5	M0
1,2,4-Trichlorobenzene	ug/L				14.5	15.0				3	
1,2-Dichlorobenzene	ug/L	ND	20	20	15.3	15.0	76	75	70-130	1	
1,2-Dichloroethane	ug/L	ND	20	20	15.3	16.2	77	81	70-130	5	
1,2-Dichloropropane	ug/L	ND	20	20	14.8	15.8	74	79	70-130	7	
1,3-Dichlorobenzene	ug/L	ND	20	20	15.0	15.2	75	76	70-130	1	
1,4-Dichlorobenzene	ug/L	ND	20	20	14.9	15.1	74	76	70-130	2	
2-Butanone (MEK)	ug/L	ND	20	20	15.1	14.6	76	73	70-130	3	
2-Hexanone	ug/L	ND	20	20	15.5	15.1	77	76	70-130	2	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	17.0	16.4	85	82	70-130	4	
Acetone	ug/L	ND	20	20	15.5	15.4	78	77	70-130	.5	
Benzene	ug/L	ND	20	20	15.0	15.8	75	79	70-130	5	
Bromochloromethane	ug/L	ND	20	20	15.6	14.5	78	73	70-130	7	
Bromodichloromethane	ug/L	ND	20	20	16.6	17.9	83	90	70-130	8	
Bromoform	ug/L	ND	20	20	14.1	14.5	71	72	70-130	2	
Bromomethane	ug/L	ND	20	20	25.6	23.7	128	118	70-130	8	
Carbon disulfide	ug/L	ND	20	20	12.3	12.1	61	60	70-130	2	M0
Carbon tetrachloride	ug/L	ND	20	20	16.0	16.7	80	83	70-130	4	
Chlorobenzene	ug/L	ND	20	20	15.1	15.9	76	80	70-130	5	
Chloroethane	ug/L	ND	20	20	11.1	11.5	55	57	70-130	4	M0
Chloroform	ug/L	ND	20	20	16.1	16.8	80	84	70-130	4	
Chloromethane	ug/L	ND	20	20	14.5	15.3	72	77	70-130	6	
cis-1,2-Dichloroethene	ug/L	ND	20	20	16.0	16.3	80	81	70-130	2	
cis-1,3-Dichloropropene	ug/L	ND	20	20	14.0	13.4	70	67	70-130	4	M0
Dibromochloromethane	ug/L	ND	20	20	14.2	15.8	71	79	70-130	11	
Ethylbenzene	ug/L	ND	20	20	15.5	15.8	78	79	70-130	2	
m&p-Xylene	ug/L		40	40	31.4	31.9	78	80	70-130	2	
Methyl-tert-butyl ether	ug/L	ND	20	20	16.7	16.5	84	82	70-130	2	
Methylene Chloride	ug/L	ND	20	20	14.8	15.4	74	77	70-130	4	
o-Xylene	ug/L		20	20	15.2	15.5	76	78	70-130	2	
Styrene	ug/L	ND	20	20	14.4	14.4	72	72	70-130	.01	
Tetrachloroethene	ug/L	ND	20	20	15.6	15.7	75	76	70-130	.8	

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QUALITY CONTROL DATA

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 153037 153038

Parameter	Units	3024467001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Toluene	ug/L	ND	20	20	15.4	15.9	77	80	70-130	3	
trans-1,2-Dichloroethene	ug/L	ND	20	20	15.7	16.1	78	81	70-130	3	
trans-1,3-Dichloropropene	ug/L	ND	20	20	14.3	14.0	71	70	70-130	2	
Trichloroethene	ug/L	ND	20	20	14.9	16.0	75	80	70-130	7	
Vinyl chloride	ug/L	ND	20	20	13.7	14.5	69	73	70-130	6	M0
Xylene (Total)	ug/L	ND	60	60	46.6	47.4	78	79	70-130	2	
1,2-Dichloroethane-d4 (S)	%						107	99	70-130		
4-Bromofluorobenzene (S)	%						97	97	70-130		
Toluene-d8 (S)	%						94	97	70-130		

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QUALIFIERS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024386

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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

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

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, Inc.
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April 05, 2010

Mr. Scott Petersen
WSP Environment & Energy
5 Sullivan Street
Cazenovia, NY 13035

RE: Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Dear Mr. Petersen:
Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Penny Westrick

penny.westrick@pacelabs.com
Project Manager

Enclosures

cc: Mr. David Bouchard, WSP Environment & Energy

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CERTIFICATIONS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Pennsylvania Certification IDs
1638 Roseytown Road Suites 2,3&4 Greensburg, PA 15601
Wyoming Certification #: 8TMS-Q
Wisconsin/PADEP Certification
West Virginia Certification #: 143
Washington Certification #: C1941
Virginia Certification #: 00112
Virgin Island/PADEP Certification
Utah/NELAC Certification #: ANTE
Texas/NELAC Certification #: T104704188-09 TX
Tennessee Certification #: TN2867
South Dakota Certification
Puerto Rico Certification #: PA01457
Pennsylvania/NELAC Certification #: 0065-282
Oregon/NELAC Certification #: PA200002
North Carolina Certification #: 42706
New York/NELAC Certification #: 10888
New Mexico Certification
New Jersey/NELAC Certification #: PA 051
New Hampshire/NELAC Certification #: 2976
Nevada Certification
Montana Certification #: Cert 0082
Missouri Certification #: 235
Michigan/PADEP Certification
Massachusetts Certification #: M-PA1457
Maryland Certification #: 308
Maine Certification #: PA0091
Louisiana/NELAC Certification #: LA080002
Louisiana/NELAC Certification #: 4086
Kentucky Certification #: 90133
Kansas/NELAC Certification #: E-10358
Iowa Certification #: 391
Indiana/PADEP Certification
Illinois/PADEP Certification
Idaho Certification
Hawaii/PADEP Certification
Guam/PADEP Certification
Georgia Certification #: 968
Florida/NELAC Certification #: E87683
Delaware Certification
Connecticut Certification #: PH 0694
Colorado Certification
California/NELAC Certification #: 04222CA
Arkansas Certification
Arizona Certification #: AZ0734
Alabama Certification #: 41590

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SAMPLE ANALYTE COUNT

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3024783001	**MP-1**	EPA 8260	JAS	46	PASI-PA
3024783002	**MP-2**	EPA 8260	JAS	46	PASI-PA
3024783003	**MP-3**	EPA 8260	JAS	46	PASI-PA
3024783004	**MP-4**	EPA 8260	JAS	46	PASI-PA
3024783005	**TB032010**	EPA 8260	JAS	46	PASI-PA

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PROJECT NARRATIVE

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Method: **EPA 8260**
Description: 8260 MSV
Client: WSP Environment & Energy - Cazenovia, NY
Date: April 05, 2010

General Information:
5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Sample: MP-1 **Lab ID: 3024783001** Collected: 03/20/10 15:50 Received: 03/23/10 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/31/10 18:36	67-64-1	
Benzene	ND	ug/L	1.0	1		03/31/10 18:36	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/31/10 18:36	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/31/10 18:36	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/31/10 18:36	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/31/10 18:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/10 18:36	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/31/10 18:36	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/31/10 18:36	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/31/10 18:36	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/31/10 18:36	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/31/10 18:36	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/31/10 18:36	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/31/10 18:36	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:36	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/31/10 18:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/31/10 18:36	107-06-2	
1,2-Dichloroethene (Total)	**52.6**	ug/L	2.0	1		03/31/10 18:36	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/31/10 18:36	75-35-4	
cis-1,2-Dichloroethene	**52.6**	ug/L	1.0	1		03/31/10 18:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/31/10 18:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/31/10 18:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 18:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 18:36	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/31/10 18:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/10 18:36	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/31/10 18:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/10 18:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/31/10 18:36	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/31/10 18:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/31/10 18:36	79-34-5	
Tetrachloroethene	**581**	ug/L	10.0	10		04/01/10 22:27	127-18-4	
Toluene	ND	ug/L	1.0	1		03/31/10 18:36	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/31/10 18:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/31/10 18:36	79-00-5	
Trichloroethene	**827**	ug/L	10.0	10		04/01/10 22:27	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/31/10 18:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/31/10 18:36	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/31/10 18:36	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/31/10 18:36	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130	1		03/31/10 18:36	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		03/31/10 18:36	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		03/31/10 18:36	2037-26-5	

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Sample: MP-2 **Lab ID: 3024783002** Collected: 03/20/10 15:51 Received: 03/23/10 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/31/10 19:03	67-64-1	
Benzene	ND	ug/L	1.0	1		03/31/10 19:03	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/31/10 19:03	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/31/10 19:03	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/31/10 19:03	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/31/10 19:03	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/10 19:03	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/31/10 19:03	75-15-0	
Carbon tetrachloride	**1.4**	ug/L	1.0	1		03/31/10 19:03	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/31/10 19:03	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/31/10 19:03	75-00-3	
Chloroform	**1.0**	ug/L	1.0	1		03/31/10 19:03	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/31/10 19:03	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/31/10 19:03	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:03	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/31/10 19:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/31/10 19:03	107-06-2	
1,2-Dichloroethene (Total)	**894**	ug/L	40.0	20		04/01/10 22:53	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/31/10 19:03	75-35-4	
cis-1,2-Dichloroethene	**887**	ug/L	20.0	20		04/01/10 22:53	156-59-2	
trans-1,2-Dichloroethene	**6.8**	ug/L	1.0	1		03/31/10 19:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/31/10 19:03	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 19:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 19:03	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/31/10 19:03	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/10 19:03	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/31/10 19:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/10 19:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/31/10 19:03	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/31/10 19:03	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/31/10 19:03	79-34-5	
Tetrachloroethene	**1670**	ug/L	20.0	20		04/01/10 22:53	127-18-4	
Toluene	ND	ug/L	1.0	1		03/31/10 19:03	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/31/10 19:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/31/10 19:03	79-00-5	
Trichloroethene	**2250**	ug/L	20.0	20		04/01/10 22:53	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/31/10 19:03	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/31/10 19:03	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/31/10 19:03	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/31/10 19:03	95-47-6	
4-Bromofluorobenzene (S)	106	%	70-130	1		03/31/10 19:03	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		03/31/10 19:03	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		03/31/10 19:03	2037-26-5	

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Sample: MP-3 **Lab ID: 3024783003** Collected: 03/20/10 15:47 Received: 03/23/10 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/31/10 19:29	67-64-1	
Benzene	ND	ug/L	1.0	1		03/31/10 19:29	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/31/10 19:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/31/10 19:29	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/31/10 19:29	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/31/10 19:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/10 19:29	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/31/10 19:29	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/31/10 19:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/31/10 19:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/31/10 19:29	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/31/10 19:29	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/31/10 19:29	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/31/10 19:29	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:29	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/31/10 19:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/31/10 19:29	107-06-2	
1,2-Dichloroethene (Total)	**600**	ug/L	20.0	10		04/01/10 23:19	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/31/10 19:29	75-35-4	
cis-1,2-Dichloroethene	**597**	ug/L	10.0	10		04/01/10 23:19	156-59-2	
trans-1,2-Dichloroethene	**3.2**	ug/L	1.0	1		03/31/10 19:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/31/10 19:29	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 19:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 19:29	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/31/10 19:29	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/10 19:29	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/31/10 19:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/10 19:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/31/10 19:29	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/31/10 19:29	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/31/10 19:29	79-34-5	
Tetrachloroethene	**1680**	ug/L	10.0	10		04/01/10 23:19	127-18-4	
Toluene	ND	ug/L	1.0	1		03/31/10 19:29	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/31/10 19:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/31/10 19:29	79-00-5	
Trichloroethene	**264**	ug/L	1.0	1		03/31/10 19:29	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/31/10 19:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/31/10 19:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/31/10 19:29	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/31/10 19:29	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130	1		03/31/10 19:29	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		03/31/10 19:29	17060-07-0	
Toluene-d8 (S)	100	%	70-130	1		03/31/10 19:29	2037-26-5	

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ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Sample: MP-4 **Lab ID: 3024783004** Collected: 03/20/10 16:33 Received: 03/23/10 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/31/10 19:55	67-64-1	
Benzene	ND	ug/L	1.0	1		03/31/10 19:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/31/10 19:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/31/10 19:55	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/31/10 19:55	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/31/10 19:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/10 19:55	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/31/10 19:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/31/10 19:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/31/10 19:55	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/31/10 19:55	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/31/10 19:55	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/31/10 19:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/31/10 19:55	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:55	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/31/10 19:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/31/10 19:55	107-06-2	
1,2-Dichloroethene (Total)	**169**	ug/L	2.0	1		03/31/10 19:55	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/31/10 19:55	75-35-4	
cis-1,2-Dichloroethene	**168**	ug/L	1.0	1		03/31/10 19:55	156-59-2	
trans-1,2-Dichloroethene	**1.2**	ug/L	1.0	1		03/31/10 19:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/31/10 19:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 19:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 19:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/31/10 19:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/10 19:55	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/31/10 19:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/10 19:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/31/10 19:55	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/31/10 19:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/31/10 19:55	79-34-5	
Tetrachloroethene	**243**	ug/L	1.0	1		03/31/10 19:55	127-18-4	
Toluene	ND	ug/L	1.0	1		03/31/10 19:55	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/31/10 19:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/31/10 19:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/31/10 19:55	79-00-5	
Trichloroethene	**131**	ug/L	1.0	1		03/31/10 19:55	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/31/10 19:55	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/31/10 19:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/31/10 19:55	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/31/10 19:55	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130	1		03/31/10 19:55	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130	1		03/31/10 19:55	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		03/31/10 19:55	2037-26-5	

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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

Sample: TB032010 **Lab ID: 3024783005** Collected: 03/20/10 00:00 Received: 03/23/10 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		03/31/10 18:10	67-64-1	
Benzene	ND	ug/L	1.0	1		03/31/10 18:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		03/31/10 18:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/31/10 18:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/31/10 18:10	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/31/10 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/10 18:10	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		03/31/10 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/31/10 18:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/31/10 18:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/31/10 18:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/31/10 18:10	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/31/10 18:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		03/31/10 18:10	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:10	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/31/10 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/31/10 18:10	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	2.0	1		03/31/10 18:10	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/31/10 18:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/31/10 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/31/10 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/31/10 18:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/31/10 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/31/10 18:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/10 18:10	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		03/31/10 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/10 18:10	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/31/10 18:10	1634-04-4	
Styrene	ND	ug/L	1.0	1		03/31/10 18:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/31/10 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		03/31/10 18:10	127-18-4	
Toluene	ND	ug/L	1.0	1		03/31/10 18:10	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/31/10 18:10	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/31/10 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/31/10 18:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/31/10 18:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		03/31/10 18:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/31/10 18:10	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		03/31/10 18:10	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		03/31/10 18:10	95-47-6	
4-Bromofluorobenzene (S)	102	%	70-130	1		03/31/10 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		03/31/10 18:10	17060-07-0	
Toluene-d8 (S)	99	%	70-130	1		03/31/10 18:10	2037-26-5	

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

QC Batch: MSV/5396 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 3024783001, 3024783002, 3024783003, 3024783004, 3024783005

METHOD BLANK: 155531 Matrix: Water
Associated Lab Samples: 3024783001, 3024783002, 3024783003, 3024783004, 3024783005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	03/31/10 17:18	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/31/10 17:18	
1,1,2-Trichloroethane	ug/L	ND	1.0	03/31/10 17:18	
1,1-Dichloroethane	ug/L	ND	1.0	03/31/10 17:18	
1,1-Dichloroethene	ug/L	ND	1.0	03/31/10 17:18	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	03/31/10 17:18	
1,2-Dichlorobenzene	ug/L	ND	1.0	03/31/10 17:18	
1,2-Dichloroethane	ug/L	ND	1.0	03/31/10 17:18	
1,2-Dichloropropane	ug/L	ND	1.0	03/31/10 17:18	
1,3-Dichlorobenzene	ug/L	ND	1.0	03/31/10 17:18	
1,4-Dichlorobenzene	ug/L	ND	1.0	03/31/10 17:18	
2-Butanone (MEK)	ug/L	ND	10.0	03/31/10 17:18	
2-Hexanone	ug/L	ND	10.0	03/31/10 17:18	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	03/31/10 17:18	
Acetone	ug/L	ND	10.0	03/31/10 17:18	
Benzene	ug/L	ND	1.0	03/31/10 17:18	
Bromochloromethane	ug/L	ND	1.0	03/31/10 17:18	
Bromodichloromethane	ug/L	ND	1.0	03/31/10 17:18	
Bromoform	ug/L	ND	1.0	03/31/10 17:18	
Bromomethane	ug/L	ND	1.0	03/31/10 17:18	
Carbon disulfide	ug/L	ND	1.0	03/31/10 17:18	
Carbon tetrachloride	ug/L	ND	1.0	03/31/10 17:18	
Chlorobenzene	ug/L	ND	1.0	03/31/10 17:18	
Chloroethane	ug/L	ND	1.0	03/31/10 17:18	
Chloroform	ug/L	ND	1.0	03/31/10 17:18	
Chloromethane	ug/L	ND	1.0	03/31/10 17:18	
cis-1,2-Dichloroethene	ug/L	ND	1.0	03/31/10 17:18	
cis-1,3-Dichloropropene	ug/L	ND	1.0	03/31/10 17:18	
Dibromochloromethane	ug/L	ND	1.0	03/31/10 17:18	
Ethylbenzene	ug/L	ND	1.0	03/31/10 17:18	
m&p-Xylene	ug/L	ND	2.0	03/31/10 17:18	
Methyl-tert-butyl ether	ug/L	ND	1.0	03/31/10 17:18	
Methylene Chloride	ug/L	ND	1.0	03/31/10 17:18	
o-Xylene	ug/L	ND	1.0	03/31/10 17:18	
Styrene	ug/L	ND	1.0	03/31/10 17:18	
Tetrachloroethene	ug/L	ND	1.0	03/31/10 17:18	
Toluene	ug/L	ND	1.0	03/31/10 17:18	
trans-1,2-Dichloroethene	ug/L	ND	1.0	03/31/10 17:18	
trans-1,3-Dichloropropene	ug/L	ND	1.0	03/31/10 17:18	
Trichloroethene	ug/L	ND	1.0	03/31/10 17:18	
Vinyl chloride	ug/L	ND	1.0	03/31/10 17:18	
Xylene (Total)	ug/L	ND	3.0	03/31/10 17:18	
1,2-Dichloroethane-d4 (S)	%	99	70-130	03/31/10 17:18	

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QUALITY CONTROL DATA

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

METHOD BLANK: 155531 Matrix: Water

Associated Lab Samples: 3024783001, 3024783002, 3024783003, 3024783004, 3024783005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4-Bromofluorobenzene (S)	%	103	70-130	03/31/10 17:18	
Toluene-d8 (S)	%	100	70-130	03/31/10 17:18	

LABORATORY CONTROL SAMPLE: 155532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.7	98	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.7	98	70-130	
1,1,2-Trichloroethane	ug/L	20	20.3	101	70-130	
1,1-Dichloroethane	ug/L	20	20.2	101	70-130	
1,1-Dichloroethene	ug/L	20	16.5	83	70-130	
1,2,4-Trichlorobenzene	ug/L	20	20.8	104	70-130	
1,2-Dichlorobenzene	ug/L	20	21.0	105	70-130	
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	
1,2-Dichloropropane	ug/L	20	19.4	97	70-130	
1,3-Dichlorobenzene	ug/L	20	20.3	102	70-130	
1,4-Dichlorobenzene	ug/L	20	21.4	107	70-130	
2-Butanone (MEK)	ug/L	20	21.1	105	70-130	
2-Hexanone	ug/L	20	24.3	122	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	20	21.3	107	70-130	
Acetone	ug/L	20	23.7	119	70-130	
Benzene	ug/L	20	20.3	101	70-130	
Bromochloromethane	ug/L	20	20.0	100	70-130	
Bromodichloromethane	ug/L	20	18.0	90	70-130	
Bromoform	ug/L	20	16.3	81	70-130	
Bromomethane	ug/L	20	24.8	124	70-130	
Carbon disulfide	ug/L	20	22.3	111	70-130	
Carbon tetrachloride	ug/L	20	17.6	88	70-130	
Chlorobenzene	ug/L	20	19.8	99	70-130	
Chloroethane	ug/L	20	18.3	91	70-130	
Chloroform	ug/L	20	20.2	101	70-130	
Chloromethane	ug/L	20	21.1	106	70-130	
cis-1,2-Dichloroethene	ug/L	20	20.5	103	70-130	
cis-1,3-Dichloropropene	ug/L	20	18.6	93	70-130	
Dibromochloromethane	ug/L	20	18.1	90	70-130	
Ethylbenzene	ug/L	20	20.1	100	70-130	
m&p-Xylene	ug/L	40	40.7	102	70-130	
Methyl-tert-butyl ether	ug/L	20	21.4	107	70-130	
Methylene Chloride	ug/L	20	19.1	95	70-130	
o-Xylene	ug/L	20	19.3	96	70-130	
Styrene	ug/L	20	19.7	98	70-130	
Tetrachloroethene	ug/L	20	20.3	102	70-130	
Toluene	ug/L	20	20.5	102	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	70-130	
trans-1,3-Dichloropropene	ug/L	20	17.5	88	70-130	

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QUALITY CONTROL DATA

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

LABORATORY CONTROL SAMPLE: 155532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	19.6	98	70-130	
Vinyl chloride	ug/L	20	21.0	105	70-130	
Xylene (Total)	ug/L	60	60.0	100	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Toluene-d8 (S)	%			103	70-130	

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QUALIFIERS

Project: Federal Mogul; 138008.2
Pace Project No.: 3024783

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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

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

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Appendix D – Pilot Test Data Sheets

SVE Stepped-Rate Test - Data Sheet
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

SVE Stepped-Rate Test				SV-1 Wellhead					Vacuum Measurements ("WC)				System Telemetry			
Step	Date	Time	Step Interval (min)	Vacuum ("WC)	Differential Pressure ("WC)	Temperature (°C)	Vapor Flow (scfm)	PID Reading (ppm) (b)	MP-1	MP-2	MP-3	MP-4	Inlet Vacuum ("Hg)	Dilution Valve (Percent Open)	VLS Vacuum ("Hg)	Outlet Temp. (°F)
1	3/16/2010	1353	0	5.30	0.28	18	29	118	0.55	0.21	0.07	0.00	4.2	100	2.0	80
	3/16/2010	1408	15	5.28	0.29	18	30	114	0.55	0.20	0.06	0.00	NM	100	NM	NM
	3/16/2010	1423	30	5.23	0.28	18	29	103	0.55	0.21	0.07	0.00	NM	100	NM	NM
2	3/16/2010	1428	0	11.9	1.2	18	58	97	1.14	0.43	0.14	0.00	4.4	100	2.0	95
	3/16/2010	1443	15	12.0	1.2	18	58	101	1.16	0.46	0.17	0.01	NM	100	NM	NM
	3/16/2010	1448	30	11.9	1.2	18	58	90	1.15	0.44	0.15	0.01	NM	100	NM	NM
3	3/16/2010	1505	0	16.2	1.9	18	75	90	1.50	0.59	0.20	0.02	4.5	100	2.0	98
	3/16/2010	1520	15	16.3	1.9	18	75	94	1.50	0.59	0.21	0.02	NM	100	NM	NM
	3/16/2010	1535	30	16.3	1.9	17	75	87	1.50	0.59	0.21	0.02	NM	100	NM	NM
4	3/16/2010	1540	0	20.5	2.8	17	89	86	1.80	0.71	0.25	0.02	4.6	100	2.2	100
	3/16/2010	1555	15	20.5	2.8	17	90	84	1.83	0.72	0.25	0.02	NM	100	NM	NM
	3/16/2010	1610	30	20.5	2.8	17	90	80	1.84	0.72	0.26	0.02	NM	100	NM	NM
5	3/16/2010	1620	0	27.0	4.2	17	110	80	2.23	0.88	0.31	0.02	4.7	100	2.3	102
	3/16/2010	1635	15	27.0	4.2	17	110	61	2.26	0.88	0.32	0.02	NM	100	NM	NM
	3/16/2010	1650	30	27.0	4.2	17	110	70	2.26	0.91	0.32	0.03	NM	100	NM	NM
6	3/16/2010	1656	0	31.5	5.2	17	121	68	2.52	1.01	0.36	0.03	4.8	100	2.4	104
	3/16/2010	1711	15	32.0	5.3	17	122	59	2.54	1.01	0.36	0.03	NM	100	NM	NM
	3/16/2010	1726	30	32.0	5.3	17	122	65	2.53	1.01	0.36	0.03	NM	100	NM	NM
7	3/16/2010	1734	0	47.5	9.6	17	161	26 (c)	3.39	1.38	0.50	0.05	6.3	75	4.0	110
	3/16/2010	1749	15	47.5	9.6	17	161	15	3.42	1.39	0.50	0.05	NM	75	NM	NM
	3/16/2010	1804	30	47.5	9.6	17	161	10	3.41	1.38	0.50	0.05	NM	75	NM	NM
8	3/16/2010	1811	0	56.0	11.9	17	177	20	3.77	1.54	0.56	0.05	7.9	60	4.7	117
	3/16/2010	1826	15	56.0	11.7	17	176	19	3.78	1.54	0.56	0.05	NM	60	NM	NM
	3/16/2010	1841	30	56.0	11.7	17	176	20	3.77	1.53	0.56	0.05	NM	60	NM	NM

a/ Abbreviations: NM = not measured; SVE = soil vapor extraction; min = minute; "WC = inches of water column; °C = degrees Celsius; scfm = standard cubic feet per minute; ppm = parts per million; "Hg = inches of mercury; VLS = vapor liquid separator.

b/ Readings may be due to PVC glue and primer (strong odor).

c/ Began PID measurements with a hand pump and tedlar bag.

SVE Constant-Rate - Data Sheet
AS/SVE Pilot Test
Former Huck Manufacturing Facility
Kingston, New York

SVE Constant-Rate Test			SV-1 Wellhead									SVE System Telemetry			
								Vacuum Measurements ("WC)							
Date	Time	Hours of Operation	Vacuum ("WC)	Differential Pressure ("WC)	Temperature (°C)	Vapor Flow (scfm)	PID Reading (ppm)	MP-1	MP-2	MP-3	MP-4	Inlet Vacuum ("Hg)	Dilution Valve (Percent Open)	VLS Vacuum ("Hg)	Outlet Temp. (°F)
3/17/2010	0855 (b)	0	57	12	17	180	25	3.87	1.58	0.58	0.06	7.9	60	NM	NM
3/17/2010	0910	0.25	57	12	17	178	28	3.84	1.55	0.56	0.05	NM	60	NM	NM
3/17/2010	0925	0.5	57	12	17	178	30	3.81	1.54	0.56	0.04	NM	60	NM	NM
3/17/2010	0945	0.83	48	9.3	17	158	31	3.35	1.36	0.49	0.04	NM	75	NM	NM
3/17/2010	0955 (c)	1	48	9.3	17	158	23	3.36	1.36	0.49	0.04	NM	75	NM	NM
3/17/2010	1025	1.5	47	9.3	17	159	24	3.36	1.35	0.48	0.03	NM	75	NM	NM
3/17/2010	1040	1.75	NM	NM	NM	NM	NM	NM	NM	NM	NM	6.0	75	3.8	107
3/17/2010	1055	2	46	9.3	17	159	21	3.33	1.33	0.47	0.02	NM	75	NM	NM
3/17/2010	1155	3	46	9.3	17	159	21	3.33	1.33	0.48	0.02	NM	75	NM	NM
3/17/2010	1255 (d)	4	46	9.3	17	159	17	3.33	1.33	0.47	0.02	NM	75	NM	NM
3/17/2010	1355	5	46	9.2	17	158	11	3.31	1.32	0.46	0.02	6.0	75	3.8	114
3/17/2010	1455	6	46	9.2	17	158	21	3.35	1.35	0.48	0.03	NM	75	NM	NM
3/17/2010	1555	7	46	9.1	17	157	13	3.33	1.33	0.48	0.03	NM	75	NM	NM
3/17/2010	1655	8	46	9.1	17	157	17	3.33	1.34	0.48	0.02	6.0	75	3.8	118
3/17/2010	1755	9	46	9.1	17	157	15	3.32	1.33	0.46	0.02	NM	75	NM	NM
3/17/2010	1855 (e)	10	46	9.1	17	157	16	3.33	1.34	0.49	0.04	NM	75	NM	NM
3/18/2010	0755	23	46	9.1	17	157	10	3.37	1.36	0.50	0.04	6.0	75	3.8	112
3/18/2010	0855 (f)	24	46	9.1	17	157	10	3.36	1.36	0.49	0.04	NM	75	NM	NM

a/ Abbreviations: NM = not measured; "WC = inches of water column; °C = degrees Celsius; scfm = standard cubic feet per minute; PID = photo-ionization detector; "Hg = inches of Mercury; °F = degrees Fahrenheit; VLS = vapor liquid separator; ppm = parts per million.
b/ Collected Sample - SVE-1-031710 for analysis by Centek Laboratories, LLC.
c/ Collected Sample - SVE-2-031710 for analysis by Microseeps, Inc.
d/ Collected Sample - SVE-3-031710 for analysis by Microseeps, Inc.
e/ Collected Sample - SVE-4-031710A for analysis by Centek Laboratories, LLC and SVE-4-031710B for analysis by Microseeps, Inc.
f/ Collected Sample - SVE-5-031710 for analysis by Centek Laboratories, LLC.

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AS Stepped-Rate Test - Step 1			Air Measurements				Groundwater Measurements			
Date: 3/18/2010			Air Pressure	Differential Pressure	Air Flow	Air Temperature	Water Temperature	Dissolved Oxygen		ORP
Measurement Location	Measurement	Time	(psig, "WC, "Hg)	("WC)	(scfm)	(°C)	(°C)	(mg/l)	pH	(mV)
Atmosphere	0	1010	29.64 "Hg	---	---	---	---	---	---	---
	1	1055	29.63 "Hg	---	---	---	---	---	---	---
	2	1115	29.61 "Hg	---	---	---	---	---	---	---
	3	1125	29.61 "Hg	---	---	---	---	---	---	---
Compressor	0	1010	---	---	---	---	---	---	---	---
	1	1055	5.9 psig	---	12	---	---	---	---	---
	2	1115	NM	---	NM	---	---	---	---	---
	3	1125	5.9 psig	---	13	---	---	---	---	---
AS-1	0	1010	0.0 psig	0.00	---	19	---	---	---	---
	1	1055	5.0 psig	0.01	6.4	19	---	---	---	---
	2	1115	4.5 psig	0.01	6.3	20	---	---	---	---
	3	1125	4.4 psig	0.01	6.3	20	---	---	---	---
MP-1	0	1010	0.00 "WC	---	---	---	14.62	0.54	6.65	235.1
	1	1055	0.00 "WC	---	---	---	14.61	0.51	6.64	244.7
	2	1115	0.01 "WC	---	---	---	14.61	0.35	6.64	235.7
	3	1125	0.01 "WC	---	---	---	14.63	0.37	6.64	232.7
MP-2	0	1010	0.00 "WC	---	---	---	14.47	1.70	6.70	194.7
	1	1055	0.01 "WC	---	---	---	14.46	0.77	6.76	191.7
	2	1115	0.01 "WC	---	---	---	14.46	0.80	6.74	189.5
	3	1125	0.02 "WC	---	---	---	14.46	0.57	6.75	184.3
MP-3	0	1010	0.00 "WC	---	---	---	14.50	0.36	6.55	-16.7
	1	1055	0.03 "WC	---	---	---	14.50	0.29	6.55	-18.2
	2	1115	0.04 "WC	---	---	---	14.50	0.17	6.55	-20.4
	3	1125	0.05 "WC	---	---	---	14.50	0.24	6.56	-19.7
MP-4	0	1010	0.00 "WC	---	---	---	14.52	4.53	6.58	-8.8
	1	1055	0.03 "WC	---	---	---	14.52	4.44	6.61	-2.8
	2	1115	0.05 "WC	---	---	---	14.52	4.04	6.64	8.5
	3	1125	0.05 "WC	---	---	---	14.52	3.71	6.67	14.8
MW-14	0	1010	0.01 "WC	---	---	---	---	---	---	---
	1	1055	0.00 "WC	---	---	---	---	---	---	---
	2	1115	0.00 "WC	---	---	---	---	---	---	---
	3	1125	0.00 "WC	---	---	---	---	---	---	---
MW-15	0	1010	0.01 "WC	---	---	---	---	---	---	---
	1	1055	0.02 "WC	---	---	---	---	---	---	---
	2	1115	0.01 "WC	---	---	---	---	---	---	---
	3	1125	0.01 "WC	---	---	---	---	---	---	---

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AS Stepped-Rate Test - Step 2 (c)			Air Measurements				Groundwater Measurements			
Date: 3/18/2010			Air Pressure	Differential Pressure	Air Flow	Air Temperature	Water Temperature	Dissolved Oxygen		ORP
Measurement Location	Measurement	Time	(psig, "WC, "Hg)	("WC)	(scfm)	(°C)	(°C)	(mg/l)	pH	(mV)
Atmosphere	1	1150	29.61 "Hg	---	---	---	---	---	---	---
	2	1220	29.60 "Hg	---	---	---	---	---	---	---
	3	1250	29.59 "Hg	---	---	---	---	---	---	---
	4	1335	29.57 "Hg	---	---	---	---	---	---	---
Compressor	1	1150	6.0 psig	---	12	---	---	---	---	---
	2	1220	5.8 psig	---	12	---	---	---	---	---
	3	1250	NM	---	NM	---	---	---	---	---
	4	1335	5.6 psig	---	12	---	---	---	---	---
AS-1	1	1150	4.8 psig	0.04	13	20	---	---	---	---
	2	1220	4.7 psig	0.04	13	20	---	---	---	---
	3	1250	4.5 psig	0.04	13	20	---	---	---	---
	4	1335	4.5 psig	0.04	13	20	---	---	---	---
MP-1	1	1150	0.02 "WC	---	---	---	14.62	0.48	6.64	230.4
	2	1220	0.01 "WC	---	---	---	14.63	0.26	6.66	229.3
	3	1250	0.01 "WC	---	---	---	14.63	0.29	6.67	229.9
	4	1335	0.02 "WC	---	---	---	14.62	0.37	6.67	229.0
MP-2	1	1150	0.03 "WC	---	---	---	14.46	0.52	6.75	187.9
	2	1220	0.03 "WC	---	---	---	14.46	0.75	6.77	187.0
	3	1250	0.03 "WC	---	---	---	14.46	0.69	6.76	190.1
	4	1335	0.04 "WC	---	---	---	14.46	0.51	6.76	194.8
MP-3	1	1150	0.07 "WC	---	---	---	14.50	0.27	6.56	-20.3
	2	1220	0.07 "WC	---	---	---	14.50	0.22	6.57	-21.1
	3	1250	0.08 "WC	---	---	---	14.50	0.22	6.57	-21.9
	4	1335	0.09 "WC	---	---	---	14.50	0.27	6.58	-23.4
MP-4	1	1150	0.06 "WC	---	---	---	14.52	3.58	6.70	16.0
	2	1220	0.07 "WC	---	---	---	14.52	3.32	6.74	10.8
	3	1250	0.07 "WC	---	---	---	14.52	3.38	6.74	4.3
	4	1335	0.07 "WC	---	---	---	14.52	4.01	6.71	2.0
MW-14	1	1150	0.00 "WC	---	---	---	---	---	---	
	2	1220	0.00 "WC	---	---	---	---	---	---	---
	3	1250	0.00 "WC	---	---	---	---	---	---	---
	4	1335	0.00 "WC	---	---	---	---	---	---	---
MW-15	1	1150	0.01 "WC	---	---	---	---	---	---	---
	2	1220	0.01 "WC	---	---	---	---	---	---	---
	3	1250	0.01 "WC	---	---	---	---	---	---	---
	4	1335	0.02 "WC	---	---	---	---	---	---	---

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a/ Abbreviations: "WC = inches of water column; °C = degrees Celsius; scfm = standard cubic feet per minute; "Hg = inches of Mercury; l = liter; mg = milligram psig = pounds per square inch gauge; mV = millivolt; ORP = oxidation-reduction potential.
b/ Measurements taken at 1010 (Measurement 0) are background measurements.
c/ Step 2 was completed with the compressor running at full capacity without throttling the injection pressure or flow. The start of the AS constant-rate test was considered to start at 1150 when Step 2 was initiated.

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Date: 3/18 - 3/19		Air Measurements				Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
Measurement Location	Time	Air Pressure (psig, "WC, "Hg)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
Atmosphere	1150	29.61 "Hg	---	---	---	---	---	---	---	---	---
	1220	29.60 "Hg	---	---	---	---	---	---	---	---	---
	1250	29.59 "Hg	---	---	---	---	---	---	---	---	---
	1335	29.57 "Hg	---	---	---	---	---	---	---	---	---
	1425	NM	---	---	---	---	---	---	---	---	---
	1500	NM	---	---	---	---	---	---	---	---	---
	1530	29.53 "Hg	---	---	---	---	---	---	---	---	---
	1600	NM	---	---	---	---	---	---	---	---	---
	1700	NM	---	---	---	---	---	---	---	---	---
	1800	NM	---	---	---	---	---	---	---	---	---
	1830	NM	---	---	---	---	---	---	---	---	---
	1900	NM	---	---	---	---	---	---	---	---	---
	0800	29.64 "Hg	---	---	---	---	---	---	---	---	---
	0900	29.65 "Hg	---	---	---	---	---	---	---	---	---
	1000	29.64 "Hg	---	---	---	---	---	---	---	---	---
	1100	29.64 "Hg	---	---	---	---	---	---	---	---	---
	1200	29.63 "Hg	---	---	---	---	---	---	---	---	---
Compressor	1150	6.00 psig	---	12	---	---	---	---	---	---	---
	1220	5.80 psig	---	12	---	---	---	---	---	---	---
	1250	NM	---	NM	---	---	---	---	---	---	---
	1335	5.60 psig	---	12	---	---	---	---	---	---	---
	1425	5.50 psig	---	11.9	---	---	---	---	---	---	---
	1500	5.50 psig	---	11.9	---	---	---	---	---	---	---
	1530	NM	---	NM	---	---	---	---	---	---	---
	1600	5.50 psig	---	12.0	---	---	---	---	---	---	---
	1700	NM	---	NM	---	---	---	---	---	---	---
	1800	5.50 psig	---	12.0	---	---	---	---	---	---	---
	1830	NM	---	NM	---	---	---	---	---	---	---
	1900	5.50 psig	---	12.0	---	---	---	---	---	---	---
	0800	5.50 psig	---	11.8	---	---	---	---	---	---	---
	0900	NM	---	NM	---	---	---	---	---	---	---
	1000	5.50 psig	---	11.8	---	---	---	---	---	---	---
	1100	NM	---	NM	---	---	---	---	---	---	---
	1200	NM	---	NM	---	---	---	---	---	---	---

AS Constant-Rate Test - Data Sheet
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Date: 3/18 - 3/19		Air Measurements				Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
Measurement Location	Time	Air Pressure (psig, "WC, "Hg)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
Helium Tank	1150	---	---	---	---	---	---	---	---	---	---
	1220	---	---	---	---	---	---	---	---	---	---
	1250	---	---	---	---	---	---	---	---	---	---
	1335	---	---	---	---	---	---	---	---	---	---
	1425	2,700 psig	---	NM	---	---	---	---	---	---	---
	1500	2,700 psig	---	840	---	---	---	---	---	---	---
	1530	2,700 psig	---	NM	---	---	---	---	---	---	---
	1600	2,500 psig	---	NM	---	---	---	---	---	---	---
	1700	2,200 psig	---	NM	---	---	---	---	---	---	---
	1800	1,200 psig	---	NM	---	---	---	---	---	---	---
	1830	NM	---	NM	---	---	---	---	---	---	---
	1900	500 psig	---	---	---	---	---	---	---	---	---
	0800	---	---	---	---	---	---	---	---	---	---
	0900	525 psig	---	960	---	---	---	---	---	---	---
	1000	500 psig	---	960	---	---	---	---	---	---	---
	1100	500 psig	---	960	---	---	---	---	---	---	---
	1200	---	---	---	---	---	---	---	---	---	---
AS-1	1150	4.8 psig	0.04	13	20	---	---	---	---	---	---
	1220	4.7 psig	0.04	13	20	---	---	---	---	---	---
	1250	4.5 psig	0.04	13	20	---	---	---	---	---	---
	1335	4.5 psig	0.04	13	20	---	---	---	---	---	---
	1425	4.3 psig	0.04	13	20	---	---	---	---	---	3,400
	1500	4.2 psig	0.04	12	20	---	---	---	---	---	10,550
	1530	4.2 psig	0.04	12	21	---	---	---	---	---	11,000
	1600	4.2 psig	0.04	12	21	---	---	---	---	---	32,000
	1700	4.2 psig	0.05	14	22	---	---	---	---	---	100,000
	1800	4.2 psig	0.04	12	22	---	---	---	---	---	118,000
	1830	NM	NM	NM	NM	---	---	---	---	---	125,000
	1900	3.9 psig	0.04	12	22	---	---	---	---	---	--
	0800	4.2 psig	0.05	14	20	---	---	---	---	---	--
	0900	4.2 psig	0.04	12	20	---	---	---	---	---	2,000
	1000	4.2 psig	0.04	12	20	---	---	---	---	---	2,000
	1100	4.2 psig	0.04	12	20	---	---	---	---	---	2,200
	1200	NM	NM	NM	NM	---	---	---	---	---	---

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Date: 3/18 - 3/19		Air Measurements				Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
Measurement Location	Time	Air Pressure (psig, "WC, "Hg)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
SV-1	1150	NM	---	---	---	---	---	---	---	NM	---
	1220	NM	---	---	---	---	---	---	---	NM	---
	1250	NM	---	---	---	---	---	---	---	NM	---
	1335	NM	---	---	---	---	---	---	---	NM	---
	1425	NM	---	---	---	---	---	---	---	NM	NM
	1500	NM	---	---	---	---	---	---	---	NM	NM
	1530	NM	---	---	---	---	---	---	---	NM	NM
	1600	0.01	---	---	---	---	---	---	---	NM	0
	1700	0.01	---	---	---	---	---	---	---	42	0
	1800	0.01	---	---	---	---	---	---	---	64	0
	1830	NM	---	---	---	---	---	---	---	NM	0
	1900	0.01	---	---	---	---	---	---	---	120 (b)	0
	0800	0.01	---	---	---	---	---	---	---	600 (b)	0
	0900	0.01	---	---	---	---	---	---	---	640 (b)	0
	1000	NM	---	---	---	---	---	---	---	593 (b)	0
	1100	0.01	---	---	---	---	---	---	---	52	50
	1200	0.01	---	---	---	---	---	---	---	48	50
MP-1	1150	0.02 "WC	---	---	---	14.62	0.48	6.64	230.4	NM	---
	1220	0.01 "WC	---	---	---	14.63	0.26	6.66	229.3	NM	---
	1250	0.01 "WC	---	---	---	14.63	0.29	6.67	229.9	NM	---
	1335	0.02 "WC	---	---	---	14.62	0.37	6.67	229.0	NM	---
	1425	0.02 "WC	---	---	---	14.61	0.46	6.67	236.3	33	0
	1500	0.02 "WC	---	---	---	14.61	0.48	6.66	235.2	NM	0
	1530	0.00 "WC	---	---	---	14.61	0.39	NM	234.0	NM	0
	1600	0.01 "WC	---	---	---	14.61	0.39	6.65	235.0	44	NM
	1700	0.02 "WC	---	---	---	14.61	0.35	NM	230.8	42	0
	1800	0.02 "WC	---	---	---	14.61	0.36	NM	230.3	51	0
	1830	NM	---	---	---	NM	NM	NM	NM	NM	0
	1900	0.02 "WC	---	---	---	NM	NM	NM	NM	47	0
	0800	0.01 "WC	---	---	---	14.62	0.80	6.66	239.7	48	575
	0900	0.01 "WC	---	---	---	14.62	0.55	6.64	236.3	57	850
	1000	0.02 "WC	---	---	---	14.62	0.54	6.64	234.9	54	1,100
	1100	0.02 "WC	---	---	---	14.62	0.53	6.65	233.5	54	1,450
	1200	0.02 "WC	---	---	---	14.61	0.54	6.64	233.0	54	1,775

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Date: 3/18 - 3/19		Air Measurements				Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
Measurement Location	Time	Air Pressure (psig, "WC, "Hg)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
MP-2	1150	0.03 "WC	---	---	---	14.46	0.52	6.75	187.9	NM	---
	1220	0.03 "WC	---	---	---	14.46	0.75	6.77	187.0	NM	---
	1250	0.03 "WC	---	---	---	14.46	0.69	6.76	190.1	NM	---
	1335	0.04 "WC	---	---	---	14.46	0.51	6.76	194.8	NM	---
	1425	0.04 "WC	---	---	---	14.46	0.49	6.71	195.1	55	0
	1500	0.04 "WC	---	---	---	14.46	0.68	6.73	191.9	NM	0
	1530	0.02 "WC	---	---	---	14.46	0.84	NM	195.0	NM	0
	1600	0.04 "WC	---	---	---	14.46	1.27	6..67	185.6	62	NM
	1700	0.04 "WC	---	---	---	14.46	1.34	NM	177.9	65	0
	1800	0.04 "WC	---	---	---	14.46	1.18	6.65	197.2	69	0
	1830	NM	---	---	---	NM	NM	NM	NM	NM	0
	1900	0.04 "WC	---	---	---	NM	NM	NM	NM	63	0
	0800	0.04 "WC	---	---	---	14.46	0.90	6.56	180.9	67	10,600
	0900	0.04 "WC	---	---	---	14.46	0.82	6.56	172.6	68	10,850
	1000	0.04 "WC	---	---	---	14.46	0.81	6.56	164.9	66	11,000
	1100	0.04 "WC	---	---	---	14.46	0.65	6.61	158.8	68	11,000
	1200	0.02 "WC	---	---	---	14.46	0.63	6.54	155.5	67	10,925
MP-3	1150	0.07 "WC	---	---	---	14.50	0.27	6.56	-20.3	NM	---
	1220	0.07 "WC	---	---	---	14.50	0.22	6.57	-21.1	NM	---
	1250	0.08 "WC	---	---	---	14.50	0.22	6.57	-21.9	NM	---
	1335	0.09 "WC	---	---	---	14.50	0.27	6.58	-23.4	NM	---
	1425	0.08 "WC	---	---	---	14.50	0.23	6.58	-25.2	40	0
	1500	0.08 "WC	---	---	---	14.50	0.24	6.58	-25.9	NM	0
	1530	0.08 "WC	---	---	---	14.50	0.21	NM	-26.7	NM	0
	1600	0.08 "WC	---	---	---	14.49	0.20	6.58	-27.3	50	NM
	1700	0.09 "WC	---	---	---	14.50	0.25	NM	-28.5	55	0
	1800	0.07 "WC	---	---	---	14.50	0.26	6.58	-29.7	64	0
	1830	NM	---	---	---	NM	NM	NM	NM	NM	550
	1900	0.09 "WC	---	---	---	NM	NM	NM	NM	56	1,175
	0800	0.08 "WC	---	---	---	14.49	0.51	6.53	-38.2	44	9,275
	0900	0.08 "WC	---	---	---	14.50	0.24	6.53	-40.2	42	7,750
	1000	0.08 "WC	---	---	---	14.49	0.19	6.53	-41.1	42	6,500
	1100	0.08 "WC	---	---	---	14.49	0.23	6.52	-41.8	37	5,600
	1200	0.08 "WC	---	---	---	14.49	0.17	6.52	-42.7	37	4,625

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Date: 3/18 - 3/19		Air Measurements				Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
Measurement Location	Time	Air Pressure (psig, "WC, "Hg)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
MP-4	1150	0.06 "WC	---	---	---	14.52	3.58	6.70	16.0	NM	---
	1220	0.07 "WC	---	---	---	14.52	3.32	6.74	10.8	NM	---
	1250	0.07 "WC	---	---	---	14.52	3.38	6.74	4.3	NM	---
	1335	0.07 "WC	---	---	---	14.52	4.01	6.71	2.0	NM	---
	1425	0.07 "WC	---	---	---	14.52	3.92	6.64	-7.2	21	0
	1500	0.07 "WC	---	---	---	14.52	3.96	6.62	-7.2	NM	0
	1530	0.07 "WC	---	---	---	14.52	4.38	NM	-8.1	NM	0
	1600	0.06 "WC	---	---	---	14.52	4.44	6.60	-7.4	23	NM
	1700	0.07 "WC	---	---	---	14.52	4.47	NM	-8.2	29	500
	1800	0.08 "WC	---	---	---	14.52	4.34	6.59	-9.1	36	850
	1830	NM	---	---	---	NM	NM	NM	NM	NM	1,525
	1900	0.07 "WC	---	---	---	NM	NM	NM	NM	42	5,000
	0800	0.08 "WC	---	---	---	14.51	4.84	6.60	-10.0	37	5,800
	0900	0.07 "WC	---	---	---	14.51	4.60	6.64	-7.2	35	4,700
	1000	0.07 "WC	---	---	---	14.51	4.60	6.59	-7.1	34	3,850
	1100	0.07 "WC	---	---	---	14.51	4.60	6.56	-6.1	30	3,250
	1200	0.07 "WC	---	---	---	14.51	4.61	6.58	-7.8	31	2,750
MW-14	1150	0.00 "WC	---	---	---	---	---	---	---	NM	---
	1220	0.00 "WC	---	---	---	---	---	---	---	NM	---
	1250	0.00 "WC	---	---	---	---	---	---	---	NM	---
	1335	0.00 "WC	---	---	---	---	---	---	---	NM	---
	1425	0.01 "WC	---	---	---	---	---	---	---	69	0
	1500	NM "WC	---	---	---	---	---	---	---	NM	0
	1530	NM	---	---	---	---	---	---	---	NM	NM
	1600	0.00 "WC	---	---	---	---	---	---	---	44	NM
	1700	NM	---	---	---	---	---	---	---	NM	NM
	1800	0.01 "WC	---	---	---	---	---	---	---	44	0
	1830	NM	---	---	---	---	---	---	---	NM	0
	1900	0.04 "WC	---	---	---	---	---	---	---	30	NM
	0800	0.00 "WC	---	---	---	---	---	---	---	48	0
	0900	-0.01 "WC	---	---	---	---	---	---	---	35	0
	1000	0.00 "WC	---	---	---	---	---	---	---	25	0
	1100	0.00 "WC	---	---	---	---	---	---	---	29	0
	1200	0.00 "WC	---	---	---	---	---	---	---	25	0

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Date: 3/18 - 3/19		Air Measurements				Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
Measurement Location	Time	Air Pressure (psig, "WC, "Hg)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
MW-15	1150	0.01 "WC	---	---	---	---	---	---	---	NM	---
	1220	0.01 "WC	---	---	---	---	---	---	---	NM	---
	1250	0.01 "WC	---	---	---	---	---	---	---	NM	---
	1335	0.02 "WC	---	---	---	---	---	---	---	NM	---
	1425	0.01 "WC	---	---	---	---	---	---	---	8	NM
	1500	NM	---	---	---	---	---	---	---	NM	NM
	1530	NM	---	---	---	---	---	---	---	NM	NM
	1600	0.01 "WC	---	---	---	---	---	---	---	8	NM
	1700	NM	---	---	---	---	---	---	---	NM	NM
	1800	0.01 "WC	---	---	---	---	---	---	---	10	0
	1830	NM	---	---	---	---	---	---	---	NM	0
	1900	0.01 "WC	---	---	---	---	---	---	---	9	0
	0800	0.01 "WC	---	---	---	---	---	---	---	7	1,900
	0900	0.00 "WC	---	---	---	---	---	---	---	3	1,750
	1000	0.02 "WC	---	---	---	---	---	---	---	2	1,250
	1100	0.01 "WC	---	---	---	---	---	---	---	2	1,400
	1200	0.01 "WC	---	---	---	---	---	---	---	2	1,400

a/ Abbreviations: NM = not measured; "WC = inches of water column; °C = degrees Celsius; scfm = standard cubic feet per minute; "Hg = inches of Mercury; l = liter; mg = milligram
psig = pounds per square inch gauge; mV = millivolt; ORP = oxidation-reduction potential; PID = photo-ionization detector; ppm = parts per million.
b/ Readings may be due to PVC glue and primer (strong odor).
c/ The AS constant-rate test started at 1150 when Step 3 of the AS stepped-rate test was initiated.

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			Air Measurements					Groundwater Measurements					
Measurement Location	Date	Time	Air Pressure (psig, "WC, "Hg)	Dilution Valve (Percent Open)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)	PID Measurements (ppm)	Helium Concentration (ppm)
Atmosphere	3/19/2010	1325	29.60 "Hg	---	---	---	---	---	---	---	---	---	---
	3/19/2010	1355	29.59 "Hg	---	---	---	---	---	---	---	---	---	---
	3/19/2010	1425	29.59 "Hg	---	---	---	---	---	---	---	---	---	---
	3/19/2010	1525	29.59 "Hg	---	---	---	---	---	---	---	---	---	---
	3/19/2010	1625	29.58 "Hg	---	---	---	---	---	---	---	---	---	---
	3/19/2010	1725	29.59 "Hg	---	---	---	---	---	---	---	---	---	---
	3/19/2010	1825	29.60 "Hg	---	---	---	---	---	---	---	---	---	---
	3/20/2010	0825	29.78 "Hg	---	---	---	---	---	---	---	---	---	---
	3/20/2010	0925	29.78 "Hg	---	---	---	---	---	---	---	---	---	---
	3/20/2010	1025	29.79 "Hg	---	---	---	---	---	---	---	---	---	---
	3/20/2010	1125	29.77 "Hg	---	---	---	---	---	---	---	---	---	---
	3/20/2010	1225	29.76 "Hg	---	---	---	---	---	---	---	---	---	---
	3/20/2010	1330	29.74 "Hg	---	---	---	---	---	---	---	---	---	---
Air Compressor	3/19/2010	1325	5.5 psig	0	---	11.8	---	---	---	---	---	---	---
	3/19/2010	1355	NM	0	---	NM	---	---	---	---	---	---	---
	3/19/2010	1425	5.5 psig	0	---	11.8	---	---	---	---	---	---	---
	3/19/2010	1525	NM	0	---	NM	---	---	---	---	---	---	---
	3/19/2010	1625	5.5 psig	0	---	11.8	---	---	---	---	---	---	---
	3/19/2010	1725	NM	0	---	NM	---	---	---	---	---	---	---
	3/19/2010	1825	5.5 psig	0	---	11.8	---	---	---	---	---	---	---
	3/20/2010	0825	5.5 psig	0	---	11.9	---	---	---	---	---	---	---
	3/20/2010	0925	NM	0	---	NM	---	---	---	---	---	---	---
	3/20/2010	1025	5.5 psig	0	---	11.9	---	---	---	---	---	---	---
	3/20/2010	1125	NM	0	---	NM	---	---	---	---	---	---	---
	3/20/2010	1225	NM	0	---	NM	---	---	---	---	---	---	---
	3/20/2010	1330	5.5 psig	0	---	11.9	---	---	---	---	---	---	---
SVE Blower	3/19/2010	1325	6.0 "Hg	75	---	---	82	---	---	---	---	---	---
	3/19/2010	1355	NM	75	---	---	NM	---	---	---	---	---	---
	3/19/2010	1425	6.0 "Hg	75	---	---	NM	---	---	---	---	---	---
	3/19/2010	1525	NM	75	---	---	NM	---	---	---	---	---	---
	3/19/2010	1625	6.0 "Hg	75	---	---	123	---	---	---	---	---	---
	3/19/2010	1725	NM	75	---	---	NM	---	---	---	---	---	---
	3/19/2010	1825	6.0 "Hg	75	---	---	124	---	---	---	---	---	---
	3/20/2010	0825	6.0 "Hg	75	---	---	118	---	---	---	---	---	---
	3/20/2010	0925	NM	75	---	---	NM	---	---	---	---	---	---
	3/20/2010	1025	6.0 "Hg	75	---	---	118	---	---	---	---	---	---
	3/20/2010	1125	NM	75	---	---	NM	---	---	---	---	---	---
	3/20/2010	1225	NM	75	---	---	NM	---	---	---	---	---	---
	3/20/2010	1330	6.0 "Hg	75	---	---	NM	---	---	---	---	---	---

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Measurement Location	Date	Time	Air Measurements					Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
			Air Pressure (psig, "WC, "Hg)	Dilution Valve (Percent Open)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
AS-1	3/19/2010	1325	4.2 psig	---	0.04	12	20	---	---	---	---	---	---
	3/19/2010	1355	4.2 psig	---	0.05	14	20	---	---	---	---	---	---
	3/19/2010	1425	4.2 psig	---	0.04	12	20	---	---	---	---	---	---
	3/19/2010	1525	4.2 psig	---	0.05	14	20	---	---	---	---	---	---
	3/19/2010	1625	4.0 psig	---	0.05	14	21	---	---	---	---	---	---
	3/19/2010	1725	4.0 psig	---	0.05	14	21	---	---	---	---	---	---
	3/19/2010	1825	4.0 psig	---	0.04	12	21	---	---	---	---	---	---
	3/20/2010	0825	4.2 psig	---	0.04	12	20	---	---	---	---	---	---
	3/20/2010	0925	4.2 psig	---	0.04	12	20	---	---	---	---	---	---
	3/20/2010	1025	4.2 psig	---	0.04	12	20	---	---	---	---	---	---
	3/20/2010	1125	4.2 psig	---	0.05	14	20	---	---	---	---	---	---
	3/20/2010	1225	4.2 psig	---	0.04	12	20	---	---	---	---	---	---
	3/20/2010	1330	4.2 psig	---	0.04	12	21	---	---	---	---	---	---
SV-1	3/19/2010	1325 (b)	47 "WC	---	9.1	157	16	---	---	---	---	20	325
	3/19/2010	1355	46 "WC	---	9.1	157	16	---	---	---	---	17	1,100
	3/19/2010	1425 (c)	46 "WC	---	9.0	156	16	---	---	---	---	18	1,150
	3/19/2010	1525	45 "WC	---	8.9	156	16	---	---	---	---	16	825
	3/19/2010	1625	45 "WC	---	8.9	156	16	---	---	---	---	12	500
	3/19/2010	1725	45 "WC	---	8.9	156	16	---	---	---	---	12	525
	3/19/2010	1825 (d)	45 "WC	---	8.8	154	16	---	---	---	---	13	325
	3/20/2010	0825 (e)	46 "WC	---	9.0	156	16	---	---	---	---	11	75
	3/20/2010	0925	46 "WC	---	9.0	156	16	---	---	---	---	10	125
	3/20/2010	1025	46 "WC	---	9.0	156	16	---	---	---	---	9	100
	3/20/2010	1125	45 "WC	---	8.9	156	16	---	---	---	---	9	100
	3/20/2010	1225	45 "WC	---	8.9	156	16	---	---	---	---	8	75
	3/20/2010	1330 (f)	45 "WC	---	8.9	156	16	---	---	---	---	8	100
MP-1	3/19/2010	1325	-3.32 "WC	---	---	---	---	14.46	0.43	6.65	233.1	0	0
	3/19/2010	1355	-3.32 "WC	---	---	---	---	14.60	0.43	6.66	236.1	NM	NM
	3/19/2010	1425	-3.31 "WC	---	---	---	---	14.60	0.44	6.66	236.9	NM	NM
	3/19/2010	1525	-3.30 "WC	---	---	---	---	14.60	0.34	6.66	229.9	NM	NM
	3/19/2010	1625	-3.31 "WC	---	---	---	---	14.60	0.28	6.70	226.2	NM	NM
	3/19/2010	1725	-3.31 "WC	---	---	---	---	14.60	0.24	6.69	194.5	NM	NM
	3/19/2010	1825	-3.32 "WC	---	---	---	---	14.60	0.24	6.69	187.9	NM	NM
	3/20/2010	0825	-3.32 "WC	---	---	---	---	14.61	0.54	6.67	206.4	NM	NM
	3/20/2010	0925	-3.33 "WC	---	---	---	---	14.61	0.48	6.65	196.9	NM	NM
	3/20/2010	1025	-3.32 "WC	---	---	---	---	14.61	0.46	6.65	197.7	NM	NM
	3/20/2010	1125	-3.32 "WC	---	---	---	---	14.60	0.45	6.65	191.1	NM	NM
	3/20/2010	1225	-3.33 "WC	---	---	---	---	14.60	0.42	6.65	168.4	NM	NM
	3/20/2010	1330	-3.32 "WC	---	---	---	---	14.60	0.45	6.65	117.9	NM	NM

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			Air Measurements					Groundwater Measurements					
Measurement Location	Date	Time	Air Pressure (psig, "WC, "Hg)	Dilution Valve (Percent Open)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)	PID Measurements (ppm)	Helium Concentration (ppm)
MP-2	3/19/2010	1325	-1.31 "WC	---	---	---	---	14.49	0.51	6.53	169.6	0	0
	3/19/2010	1355	-1.31 "WC	---	---	---	---	14.46	0.48	6.51	169.6	NM	NM
	3/19/2010	1425	-1.31 "WC	---	---	---	---	14.46	0.49	6.56	171.1	NM	NM
	3/19/2010	1525	-1.30 "WC	---	---	---	---	14.46	0.47	6.56	174.1	NM	NM
	3/19/2010	1625	-1.30 "WC	---	---	---	---	14.46	0.55	6.56	175.2	NM	NM
	3/19/2010	1725	-1.30 "WC	---	---	---	---	14.46	0.54	6.57	173.3	NM	NM
	3/19/2010	1825	-1.32 "WC	---	---	---	---	14.46	0.57	6.55	167.4	NM	NM
	3/20/2010	0825	-1.31 "WC	---	---	---	---	14.46	1.40	6.64	188.9	NM	NM
	3/20/2010	0925	-1.32 "WC	---	---	---	---	14.46	1.31	6.65	189.0	NM	NM
	3/20/2010	1025	-1.31 "WC	---	---	---	---	14.46	1.28	6.65	188.1	NM	NM
	3/20/2010	1125	-1.30 "WC	---	---	---	---	14.45	1.61	6.65	186.3	NM	NM
	3/20/2010	1225	-1.31 "WC	---	---	---	---	14.45	1.69	6.64	185.7	NM	NM
	3/20/2010	1330	-1.32 "WC	---	---	---	---	14.45	1.55	6.64	190.3	NM	NM
MP-3	3/19/2010	1325	-0.40 "WC	---	---	---	---	14.49	0.21	6.52	-43.3	0	0
	3/19/2010	1355	-0.40 "WC	---	---	---	---	14.49	0.16	6.53	-43.5	NM	NM
	3/19/2010	1425	-0.40 "WC	---	---	---	---	14.49	0.18	6.53	-43.7	NM	NM
	3/19/2010	1525	-0.39 "WC	---	---	---	---	14.49	0.19	6.52	-44.0	NM	NM
	3/19/2010	1625	-0.40 "WC	---	---	---	---	14.49	0.16	6.51	-44.4	NM	NM
	3/19/2010	1725	-0.40 "WC	---	---	---	---	14.49	0.18	6.51	-44.9	NM	NM
	3/19/2010	1825	-0.40 "WC	---	---	---	---	14.49	0.17	6.51	-45.3	NM	NM
	3/20/2010	0825	-0.40 "WC	---	---	---	---	14.50	0.37	6.50	-48.5	NM	NM
	3/20/2010	0925	-0.40 "WC	---	---	---	---	14.50	0.20	6.50	-49.9	NM	NM
	3/20/2010	1025	-0.40 "WC	---	---	---	---	14.50	0.15	6.50	-50.7	NM	NM
	3/20/2010	1125	-0.39 "WC	---	---	---	---	14.50	0.20	6.50	-51.3	NM	NM
	3/20/2010	1225	-0.40 "WC	---	---	---	---	14.49	0.16	6.50	-51.9	NM	NM
	3/20/2010	1330	-0.40 "WC	---	---	---	---	14.49	0.18	6.49	-52.5	NM	NM
MP-4	3/19/2010	1325	0.03 "WC	---	---	---	---	14.49	4.61	6.58	-7.2	29	2,525
	3/19/2010	1355	0.03 "WC	---	---	---	---	14.51	4.61	6.61	-8.6	27	2,675
	3/19/2010	1425	0.03 "WC	---	---	---	---	14.51	4.61	6.57	-7.2	26	2,750
	3/19/2010	1525	0.03 "WC	---	---	---	---	14.51	4.63	6.62	-9.5	28	2,900
	3/19/2010	1625	0.03 "WC	---	---	---	---	14.51	4.62	6.61	-7.5	28	3,000
	3/19/2010	1725	0.03 "WC	---	---	---	---	14.51	4.61	6.61	-6.5	28	3,125
	3/19/2010	1825	0.02 "WC	---	---	---	---	14.51	4.61	6.57	-6.4	28	3,125
	3/20/2010	0825	0.03 "WC	---	---	---	---	14.52	4.96	6.59	-6.0	25	1,425
	3/20/2010	0925	0.03 "WC	---	---	---	---	14.52	4.76	6.54	-3.1	26	1,425
	3/20/2010	1025	0.02 "WC	---	---	---	---	14.52	4.72	6.55	-4.6	23	1,350
	3/20/2010	1125	0.02 "WC	---	---	---	---	14.51	4.74	6.58	-5.4	23	1,300
	3/20/2010	1225	0.02 "WC	---	---	---	---	14.51	4.75	6.58	-4.9	23	1,225
	3/20/2010	1330	0.02 "WC	---	---	---	---	14.51	4.73	6.57	-4.2	22	1,150

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Measurement Location	Date	Time	Air Measurements					Groundwater Measurements				PID Measurements (ppm)	Helium Concentration (ppm)
			Air Pressure (psig, "WC, "Hg)	Dilution Valve (Percent Open)	Differential Pressure ("WC)	Air Flow (scfm)	Air Temperature (°C)	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	ORP (mV)		
MW-14	3/19/2010	1325	0.00 "WC	---	---	---	---	---	---	---	---	33	0
	3/19/2010	1355	0.00 "WC	---	---	---	---	---	---	---	---	17	0
	3/19/2010	1425	0.00 "WC	---	---	---	---	---	---	---	---	21	0
	3/19/2010	1525	0.00 "WC	---	---	---	---	---	---	---	---	20	NM
	3/19/2010	1625	0.00 "WC	---	---	---	---	---	---	---	---	25	NM
	3/19/2010	1725	0.00 "WC	---	---	---	---	---	---	---	---	30	NM
	3/19/2010	1825	0.00 "WC	---	---	---	---	---	---	---	---	28	NM
	3/20/2010	0825	0.00 "WC	---	---	---	---	---	---	---	---	56	NM
	3/20/2010	0925	0.01 "WC	---	---	---	---	---	---	---	---	49	NM
	3/20/2010	1025	0.00 "WC	---	---	---	---	---	---	---	---	45	NM
	3/20/2010	1125	0.00 "WC	---	---	---	---	---	---	---	---	42	NM
	3/20/2010	1225	0.00 "WC	---	---	---	---	---	---	---	---	39	NM
	3/20/2010	1330	0.00 "WC	---	---	---	---	---	---	---	---	39	NM
MW-15	3/19/2010	1325	0.01 "WC	---	---	---	---	---	---	---	---	3	1,275
	3/19/2010	1355	0.01 "WC	---	---	---	---	---	---	---	---	2	1,025
	3/19/2010	1425	0.01 "WC	---	---	---	---	---	---	---	---	2	900
	3/19/2010	1525	0.01 "WC	---	---	---	---	---	---	---	---	2	1,150
	3/19/2010	1625	0.01 "WC	---	---	---	---	---	---	---	---	2	725
	3/19/2010	1725	0.01 "WC	---	---	---	---	---	---	---	---	3	850
	3/19/2010	1825	0.01 "WC	---	---	---	---	---	---	---	---	2	NM
	3/20/2010	0825	0.01 "WC	---	---	---	---	---	---	---	---	5	800
	3/20/2010	0925	0.01 "WC	---	---	---	---	---	---	---	---	4	675
	3/20/2010	1025	0.01 "WC	---	---	---	---	---	---	---	---	3	650
	3/20/2010	1125	0.01 "WC	---	---	---	---	---	---	---	---	2	625
	3/20/2010	1225	0.01 "WC	---	---	---	---	---	---	---	---	3	575
	3/20/2010	1330	0.01 "WC	---	---	---	---	---	---	---	---	3	600

a/ Abbreviations: NM = not measured; "WC = inches of water column; °C = degrees Celsius; scfm = standard cubic feet per minute; "Hg = inches of Mercury; l = liter; mg = milligram
°F = degrees Fahrenheit; psig = pounds per square inch gauge; mV = millivolt; PID = photo-ionization detector; ORP = oxidation-reduction potential; ppm = parts per million.
b/ Collected Sample - AS/SVE-1-031910 for analysis by Microseeps, Inc.
c/ Collected Sample - AS/SVE-2-031910 for analysis by Centek Laboratories, LLC.
d/ Collected Sample - AS/SVE-3-031910 for analysis by Microseeps, Inc.
e/ Collected Sample - AS/SVE-4-032010 for analysis by Microseeps, Inc.
f/ Collected Sample - AS/SVE-5-032010 for analysis by Centek Laboratories, LLC at 1325.