

**ENGINEERING REPORT AND OPERATION,
MONITORING AND MAINTENANCE PLAN FOR
WIN-HOLT EQUIPMENT CORPORATION SITE
592 BROOK STREET, GARDEN CITY, NEW YORK
NYSDEC VCP SITE #V00243-1**

**PREPARED FOR
WIN-HOLT EQUIPMENT CORPORATION
FOR SUBMITTAL TO THE
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

PREPARED BY
FPM **group**
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JULY 2009

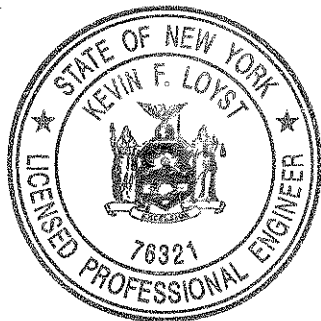
**ENGINEERING REPORT AND
OPERATION, MONITORING AND MAINTENANCE PLAN**

Prepared for

Facility: Win-Holt Equipment Corporation
592 Brook Street
Garden City, New York
NYSDEC VCP # V00243-1

FPM File No: 562-08-09

I certify that the remediation activities described herein were implemented and completed in substantial accordance with the New York State Department of Environmental Conservation-approved Remedial Action Work Plan and associated documents, as described herein.



New York State Professional Engineer # 76321

A handwritten signature in black ink, appearing to be "K. Loyst", written over a horizontal line.

Signature

It is a violation of Article 130 of the New York State Education Law for any person to alter this document in any way without the express written verification or adoption by a New York State licensed land surveyor or engineer in accordance with Section 7209(2), Article 130, New York State Education Law.

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- A Air Sparging and Soil Vapor Extraction Well Installation Logs and Well Sampling Logs
- B System Process Instrumentation Diagrams
- C Equipment Specifications
- D Laboratory Analytical Reports
- E HRC Calculations

SECTION 1.0 INTRODUCTION

This Engineering Report and Operation, Monitoring and Maintenance (OM&M) Plan has been prepared by FPM Group (FPM) to document the installation of the soil vapor extraction (SVE) and air sparging (AS) system at New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Program (VCP) Site #V00243-1, identified as Win-Holt Equipment Corporation (Win-Holt) Site, located at 592 Brook Street in Garden City, New York (Site). This report also documents the injection of Hydrogen-Releasing Compound (HRC) and Oxygen-Releasing Compound (ORC) as remedial measures, and recent groundwater monitoring procedures and results. Procedures to operate, monitor and maintain the remedial measures are also provided herein. The Site location is shown on Figure 1.1.

The AS/SVE system was installed between November 2007 and January 2008 in accordance with the NYSDEC-approved Pilot Test Report for the Win-Holt Equipment Corporation Site dated October 2006. Figure 1.2 depicts the site and remediation system layouts.

The AS/SVE system was installed in a former drywell area at the Site. Drywell remediation by soil removal was performed in 1997. Subsequent soil investigations determined that minor to moderate soil contamination remained present in the vicinity of the former drywell area between 14 and 24 feet below grade.

Groundwater sampling had detected concentrations of several volatile organic compounds (VOCs), including total xylenes, toluene and ethylbenzene, in the vicinity and slightly downgradient of the former drywell area. Several chlorinated solvent VOCs, including 1,1,1-trichloroethane (1,1,1-TCA), trichloroethylene (TCE), and tetrachloroethylene (PCE), were detected in groundwater further downgradient of the former drywell area.

Based on these findings, the NYSDEC required that remediation of the impacted soil and groundwater be performed. A Remedial Action Work Plan (RAWP) for the site was submitted by FPM in June 2005. The selected remedy for the site included the installation of an AS/SVE system to remediate onsite groundwater and soil in conjunction with the injection of ORC onsite (FPM, January 24, 2007 letter, NYSDEC February 26, 2007 letter). Injection of HRC at downgradient locations was selected to aid in the remediation of offsite groundwater. Groundwater sampling of select onsite and offsite monitoring wells prior to and following system startup was recommended to evaluate the effectiveness of the AS/SVE system.



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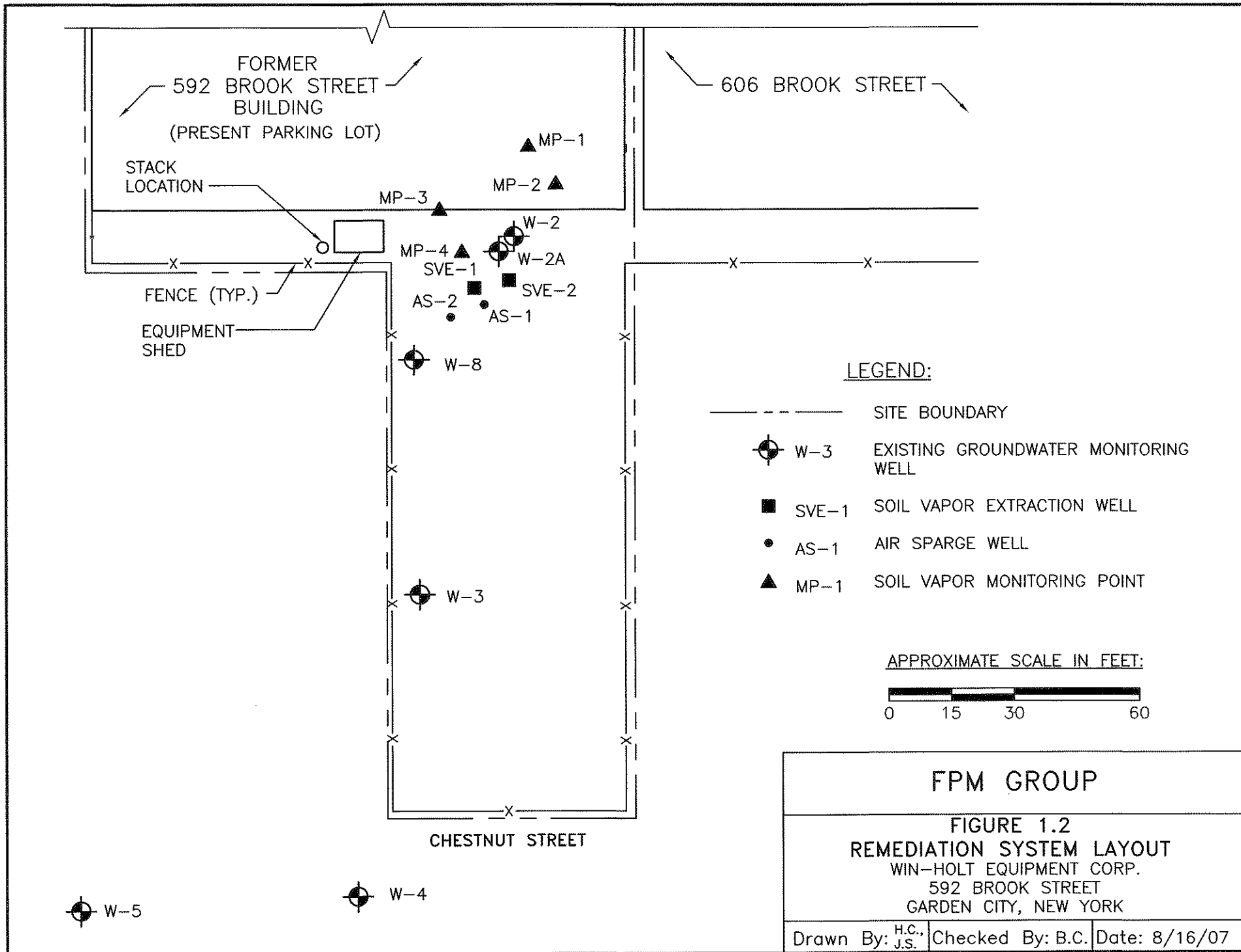
FIGURE 1.1

SITE LOCATION
WIN-HOLT EQUIPMENT CORPORATION
592 BROOK STREET
GARDEN CITY, NEW YORK

Drawn by: TAC

Checked By: JSB

Date: 5/7/08



SECTION 2.0

AIR SPARGING/SOIL VAPOR EXTRACTION REMEDIATION SYSTEM

The following section details the installation of the AS/SVE remediation system approved by the NYSDEC. This section also includes information concerning the system startup, performance, emissions monitoring, and operation and maintenance. The remediation system layout is shown on previously-presented Figure 1.2.

2.1 AS/SVE System Installation

The components of the AS/SVE system were installed by subcontractors to FPM between 2005 and 2008. FPM provided oversight of system installation and subsequent operation, monitoring and maintenance.

2.1.1 AS/SVE Well Installation

Installation of the AS and SVE wells was performed by Associated Environmental Services, Inc. under the supervision of FPM personnel. The well installation was conducted in April 2005 and the wells were subsequently used for pilot-testing purposes.

The AS and SVE wells were constructed of two-inch diameter Schedule 80 PVC. Well AS-1 was screened from 40 to 42 feet below grade and well AS-2 was screened from 56 to 58 feet below grade. Well SVE-1 was screened from 17 to 22 feet below grade and well SVE-2 was screened from 5 to 8 feet below grade. The well construction diagrams for the AS and SVE wells are included in Appendix A.

2.1.2 AS/SVE System Description

Installation of the AS/SVE system was performed by EnviroTrac, Ltd (EnviroTrac) of Ronkonkoma, New York and was overseen by FPM. EnviroTrac coordinated the procurement and installation of the remediation system equipment. Installation of the remediation system, including the construction of well manways, subsurface piping, and the above-grade components, was conducted between November 2007 and January 2008.

The installation of the subsurface system piping was accomplished by the emplacement of Schedule 80 PVC piping in subsurface trenches extending from each individual well to the remediation system enclosure. The piping diameter for the AS and SVE systems was two inches and was selected based upon the specifications of the operating equipment. Galvanized two-inch pipe was utilized in the

construction of the aboveground portion of the AS manifolds due to the anticipated heat associated with compressed air flow.

The operating equipment utilized for the AS system includes a Becker model KDT 3.60 5.0-horsepower 208-volt 3-phase totally-enclosed fan-cooled (TEFC) rotary-vane compressor, a high-temperature shut off switch, air flow gauges, pressure gauges, a galvanized metal manifold, and an associated control panel with timer.

The equipment utilized for the SVE system includes a 5-horsepower, 208-volt, single-phase regenerative blower (Rotron model EN757F72XL), a moisture separator equipped with an explosion-proof high water safety switch, an air filter, a manifold, an air flow meter, vacuum gauges, an effluent stack, and an associated control panel. The control panel is also equipped with an electrical interlock that prevents the AS system from operating when the SVE system is offline. The system's effluent stack was completed to a height of approximately 20 feet above grade, and is outfitted to allow the use of carbon treatment, if required.

Process instrumentation diagrams and equipment specifications are included in Appendices B and C, respectively. As-built system drawings showing the equipment layout in the shed, the piping layout from the wells to the equipment shed, and the AS and SVE wells and appurtenances are also included in Appendix B.

2.2 AS/SVE System Startup

On February 12, 2008, the remediation system was placed online by FPM and EnviroTrac. The system was monitored until system vacuums, pressures, and airflow stabilized. A calibrated photoionization detector (PID) was also utilized to monitor effluent emissions. Slight modifications (valve adjustments) were made to both the AS and SVE operating parameters to optimize system performance.

2.2.1 AS/SVE System Performance Measurements

The remediation system is equipped with several airflow, pressure, and vacuum gauges. These gauges have been installed to assist in optimizing system performance and also to monitor system component operation. The process instrumentation diagrams prepared for the system (included in Appendix B) show a schematic layout of all gauges and associated valves.

A system logbook has been prepared and is kept at the site for operator reference. The logbook contains operating logs for recording system parameters from the various gauges and includes figures showing the system wells and equipment configuration.

AS/SVE system monitoring has generally been conducted on a monthly basis. Information summarizing the monitored system parameters to date is included in Table 2.2.1.1. These data indicate that the minimum air flows for the AS wells (10 standard cubic feet per minute, or scfm, based on the pilot test) are being exceeded, with actual airflows ranging from 12 to 14.5 scfm. In addition, the air pressure applied to the AS wells (6.5 to 20 pounds per square inch, or psi) exceeds the pilot test pressure (5 psi). These data indicate that the AS optimum radius of influence (ROI) for both the shallow and deep zones (17 feet and 10 feet, respectively) is likely exceeded, resulting in a larger AS treatment zone than designed.

To further evaluate the AS ROI, pressure readings were recorded at monitoring wells W-2, W-2A, W-3, and W-8 during operation of the AS/SVE system. The following positive pressures were noted: 28 inches of water at W-2 and W-2A, 30 inches of water at W-8, and 0.5 inches of water at W-3. Based on the pressures noted in these wells, the AS system appears to be providing a sufficient ROI to cover the area to at least well W-8 and some influence is observed as far away as well W-3. The AS ROI will be further evaluated during subsequent monitoring events.

The SVE monitoring data indicate that the applied vacuums at the two SVE wells range from 28 to 38 inches of water ("H₂O"), which exceed the optimum applied vacuums of 10 to 20 inches of water determined in the pilot test to result in the ROIs of 17 to 24 feet. Therefore, the actual ROIs for these SVE wells are likely larger than observed in the pilot test.

Vacuum measurements have been recorded at monitoring points MP-1 through MP-4 during operation of the AS/SVE system to further evaluate the SVE ROI. These data are shown graphically on Figure 2.2.1.1 and indicate that induced vacuum has been observed at all four monitoring points, which are located up to 34 feet from the shallow SVE well (SVE-2) and up to 35 feet from the deep SVE well (SVE-1). These observations confirm that an SVE ROI of at least 35 feet is observed.

Please note that the primary purpose of the shallow-depth SVE well was to induce a vacuum beneath the former Site building. However, the building was destroyed by fire in July 2006 and the location of the former building is now utilized as an open parking lot. There are no plans to redevelop a building on the Site at this time and, therefore, vapor intrusion at the Site building is not a concern at this time.

TABLE 2.2.1.1
SOIL-VAPOR EXTRACTION/AIR SPARGE SYSTEM OPERATING LOG
WIN-HOLT EQUIPMENT CORPORATION SITE
592 BROOK STREET, GARDEN CITY, NEW YORK

Date	SVE/AIR SPARGE MONITORING DATA												Comments/ Observations
	SVE System						Air Sparge System						
	Vacuum Before Air Filter ("H2O)	Vacuum After Air Filter ("H2O)	Vacuum @ Well SVE-1 ("H2O)	Vacuum @ Well SVE-2 ("H2O)	Total System Flowrate (scfm)	Discharge Analysis w/PID (ppm)	Compressor Discharge Pressure (psi)	Pressure @ Well AS-2 (psi)	Pressure @ Well AS-1 (psi)	Flow To Well AS-2 (scfm)	Flow To Well AS-1 (scfm)	Compressor Discharge Temperature (oF)	
2/12/2008	42	45	36	34	135	5.5	15	15.5	15.5	12	12	100	
2/25/2008	46	48	37	36	140	5.3	14	15.5	16	12	14	115	
4/18/2008	45	47	37	35	138	2.9	15	16	16	13	12	120	
5/23/2008	49	55	38	36	140	3.6	15	16.5	16	12	12	120	
7/24/2008	48	40	26	28	155	2.1	10.5	11	12	12	14	125	
6/24/2008	46	43	34	30	138	2.9	14	12	14	13	12	120	
7/24/2008	46	42	35	30	140	3.2	15	14.5	15	12	12	125	
9/19/2008	48	44	30	32	140	2.8	12.5	12	14	12	14	115	
10/9/2008	46	48	30	30	155	1.9	15	15	12	13	12	90	
11/21/2008	45	50	32	32	145	2.2	14	16	14	12	12	95	
12/11/2008	-	-	-	-	-	-	-	-	-	-	-	-	System off upon arrival. Appears to be an issue with the water knockout drum. Possible frozen parts.
1/7/2009	44	52	28	28	170	1.9	16	20	6.5	14.5	12.5	50	System repaired and restarted. Effluent air monitoring and sampled after operated system for 20 hours.
2/18/2009	45	45	30	30	155	2.1	14	18	12	12	12	90	
3/19/2009	46	48	32	28	160	1.4	14	16	14	14	12	95	
4/5/2009	45	46	30	30	165	1.8	14.5	15	12	13	12	95	
5/7/2009	44	48	30	28	155	1.7	15	14.5	14	14	13	110	
6/22/2009	44	46	30	28	150	1.6	14	14	12	13	12	115	

Notes:

"H₂O = inches of water

scfm = standard cubic feet per minute

ppm = parts per million

psi = pounds per square inch

AS-1 = Shallow well, screened 40 to 42 feet

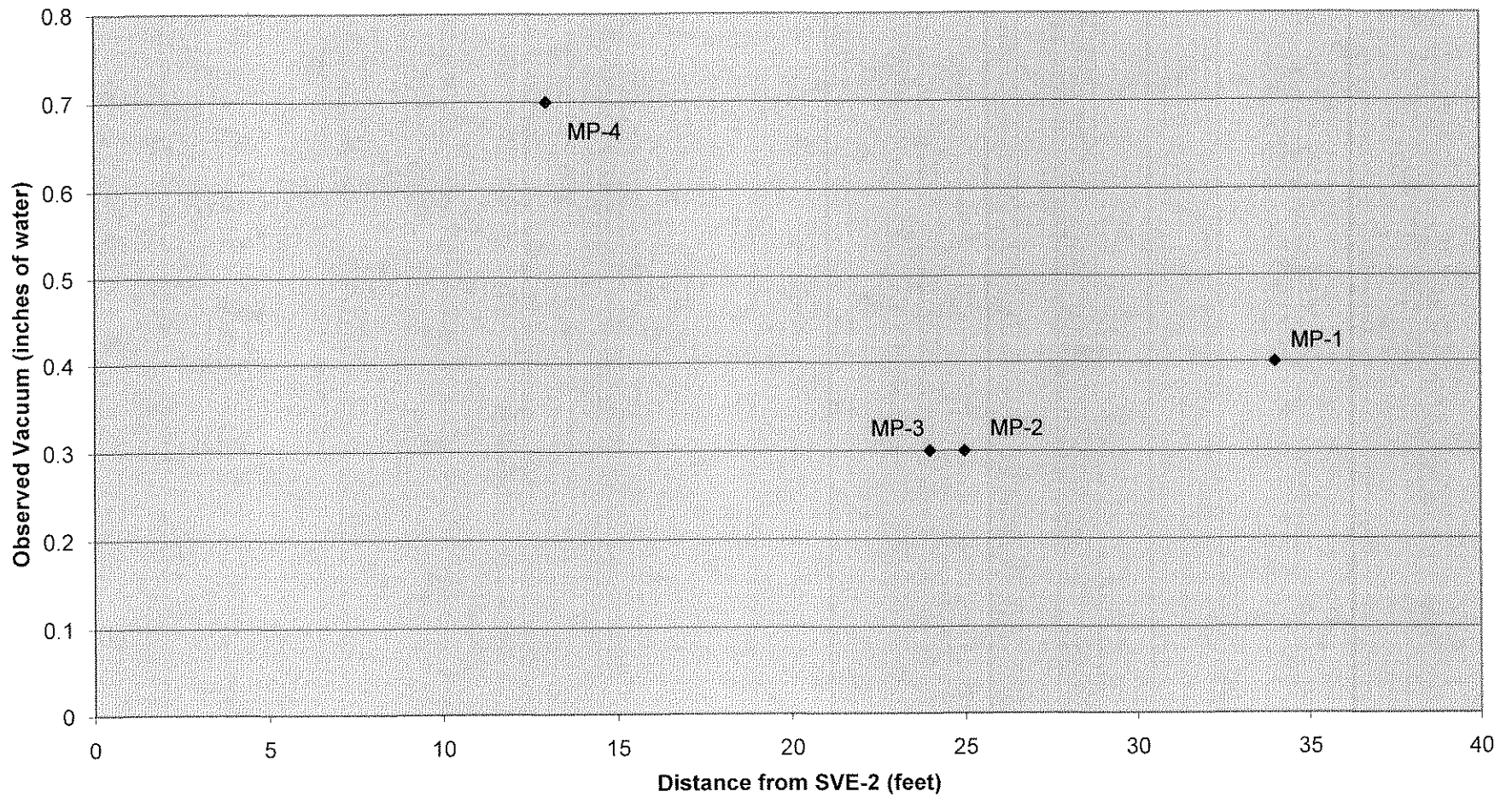
AS-2 = Deep well, screened 56 to 58 feet

SVE-1 = Deep well, screened 17 to 22 feet

SVE-2 = Shallow well, screened 5 to 8 feet

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Figure 2.2.1.1
Monitoring Point Vacuum Measurements
Win-Holt Equipment Corporation Site
592 Brook Street, Garden City, New York



Based on the AS/SVE system monitoring data and other measurements described above, the estimated extents of the AS and SVE ROIs are shown on Figure 2.2.1.2. Both the AS and SVE ROIs completely overlap the area of the Site that had been impacted with non-chlorinated VOCs prior to remediation; therefore, the AS/SVE system is anticipated to be capable of remediating the identified onsite groundwater impact.

2.2.2 SVE Emissions Monitoring

An evaluation of the anticipated SVE effluent emissions was initially performed during the remediation system pilot test conducted in 2006. Emissions data were evaluated in accordance with the NYSDEC Division of Air Resources (DAR) Program Policy (DAR-1) entitled, "Guidelines for the Control of Toxic Ambient Air Contaminants" (NYSDEC, 1997). The effluent data were used to calculate the various potential impacts, as described in DAR-1, which were then compared with the corresponding Annual Guideline Concentration (AGC) or Short-Term Guideline Concentration (SGC) values, as applicable. The results of the initial emissions testing are documented in the Pilot Test Report. Based upon the SVE effluent emissions data collected during the pilot test, xylenes, TCE, and 1,1,1-TCA were detected at the highest concentrations. Other VOCs were also detected, but at much lower concentrations. The total xylenes concentration was noted to be the most elevated contaminant and was, therefore, utilized to evaluate if vapor treatment may be required. The maximum TCE concentration was also evaluated due to its low DAR-1 AGC. The calculated impacts for xylenes and TCE were both found to be less than their respective AGCs and SGCs. Therefore, based on the pilot test emissions results, SVE emissions treatment was not deemed necessary.

To confirm SVE emissions compliance following the installation of the system, FPM performed effluent sampling of the SVE system on February 25, 2008, October 9, 2008, January 7, 2009, and May 7, 2009. An effluent sample was collected on each occasion from the effluent sampling port located between the blower and the effluent stack pipe utilizing a Tedlar air sampling bag. Each sample was transported via overnight courier to a New York State Department of Health-approved laboratory for analysis of VOCs by EPA Method T0-14. Table 2.2.2.1 summarizes the laboratory data and the complete laboratory analytical reports are included in Appendix D. The analytical data from the pilot test are included for comparison. The analytical data indicate that only relatively low concentrations of several VOCs are generally detected. Xylenes, which were detected at elevated concentrations during the pilot test, have generally not been detected during subsequent effluent sampling events. TCE was initially detected at a concentration of 472 parts per billion by volume (ppbv), which was lower than the concentration previously evaluated during the pilot test; TCE levels have continued to decrease. The

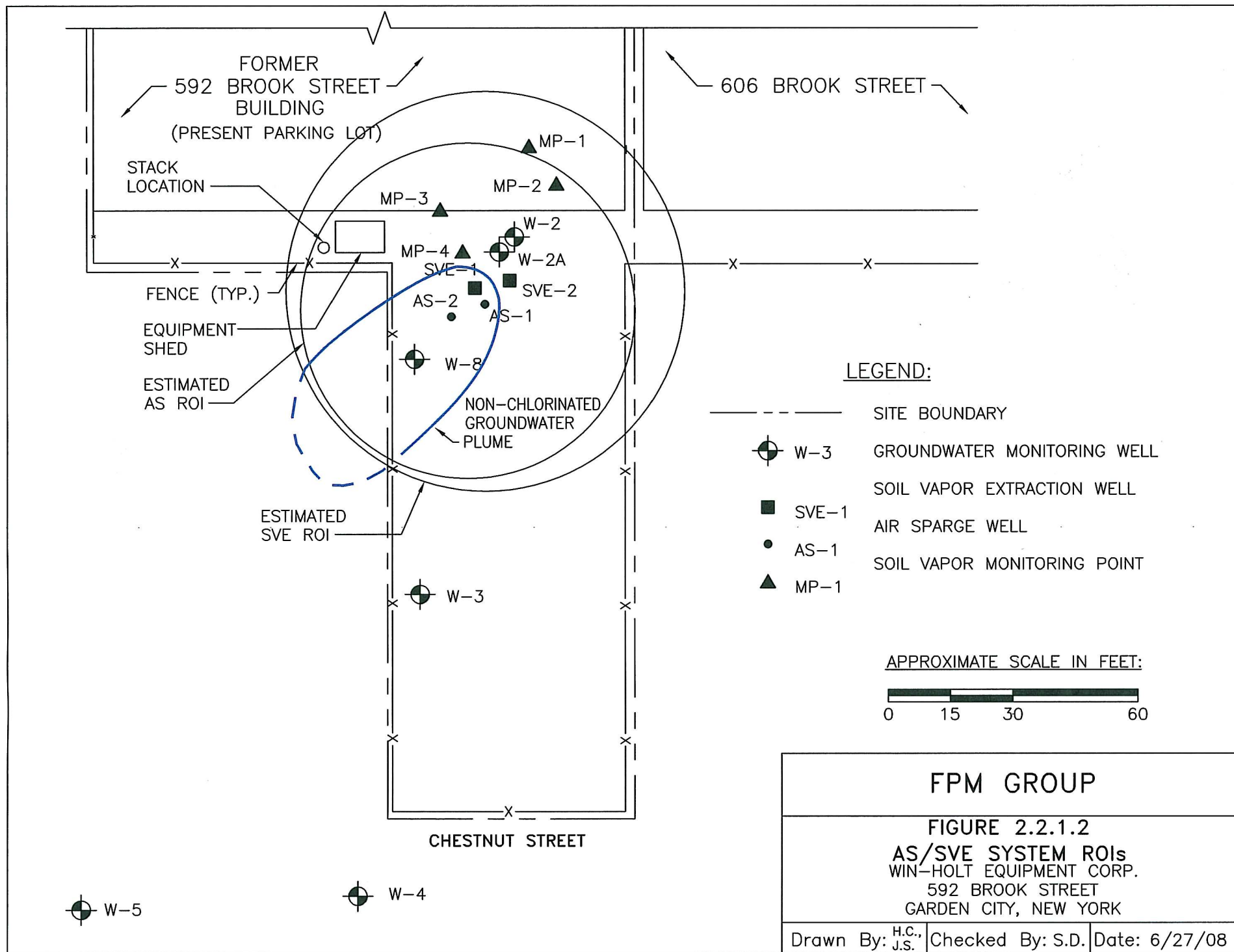


TABLE 2.2.2.1
REMEDIATION SYSTEM EFFLUENT VOLATILE ORGANIC COMPOUND DATA
WIN-HOLT EQUIPMENT CORPORATION SITE
592 BROOK STREET, GARDEN CITY, NEW YORK

Sample Name	Pilot Test*	Effluent	Effluent 1009	Effluent 0107	Effluent 0507	AGC	SGC
SVE Flow Rate (SCFM)	200	140	155	170	155		
Sample Date	5/25-26/06	2/25/08	10/09/08	1/07/09	5/07/09		
Volatile Organic Compounds in ppbv							
1,1,1-Trichloroethane	36	63.0	230	850	860	183	12,461
Acetone	ND	ND	95.0	ND	ND	11,787	75,775
Benzene	ND	10.0	ND	5.8	ND	0.04	407
cis-1,2-Dichloroethylene	19	7.0	ND	ND	ND	15.9	-
Isopropanol	ND	ND	8.6	ND	ND	2,848	39,875
Methyl Ethyl ketone	ND	ND	43	ND	ND	1,695	4,408
Tetrachloroethylene	19	29	ND	18	26	0.15	147
Trichloroethylene	940	472	70	70	160	0.09	2,605
Trichlorofluoromethane	ND	ND	8.4	ND	ND	178	12,102
Toluene	ND	ND	ND	9	ND	1,327	9,819
Xylenes	6,000	ND	ND	ND	11	23	990

Notes:

Only analytes detected in the sample are included in this table. See laboratory report in Appendix D for complete data.

* = Maximum value observed during the pilot test

ND = Not Detected.

SCFM = Standard cubic feet per minute.

ppbv = parts per billion by volume.

AGC = Annual Guideline Concentration, as of 9/10/07.

SGC = Short-Term Guideline Concentration, as of 9/10/07.

Please note that effluent data cannot be compared directly with the AGC or SGC values. The effluent data must be used to calculate the various potential impacts, as described in DAR-1, which are then compared with the AGCs and SGCs.

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concentration of 1,1,1-TCA has increased throughout the operation of the SVE system and appears to have recently stabilized.

As requested in the NYSDEC's June 18, 2008 comment letter to the original Engineering Report submittal, the AGC and SGC for each detected VOC have been added to Table 2.2.2.1. However, it should be noted that the effluent data cannot be compared directly with the AGC or SGC values. To evaluate whether the effluent data present a concern, the data are used to calculate the various potential impacts, as described in DAR-1, which are then compared with the AGCs and SGCs. The SVE effluent data were evaluated in this manner. With the exception of 1,1,1-TCA, the effluent concentrations are all comparable to or lower than those observed during the pilot test. In addition, the system flow rate is lower than that of the pilot test. An evaluation of the pilot test data showed that the effluent levels at that time did not present a concern. Therefore, the only VOC for which an evaluation was indicated is 1,1,1-TCA.

1,1,1-TCA loading rates and air concentrations in pounds per hour and micrograms per cubic meter were calculated in accordance with the NYSDEC DAR Program Policy entitled, "Guidelines for the Control of Toxic Ambient Air Contaminants" (NYSDEC, 1997), as shown below. The calculations presented in Appendix B of the DAR policy document were made to evaluate the anticipated impacts using analytical data collected during the May 7, 2009 sampling event, as this was the most elevated 1,1,1-TCA concentration detected. These impacts were then compared with the DAR-1 AGC (183 ppbv or 1,000 ug/m³) and SGC (12,461 ppb or 68,000 ug/m³) for 1,1,1-TCA published in the NYSDEC's DAR-1 AGC/SGC Tables (NYSDEC, 2007).

The calculated loading rate based on this effluent concentration is as follows:

1. The volume (Equation 1) of one mole of 1,1,1-TCA at a maximum effluent temperature of 35 °C (308° K) is:

$$V(L) = \frac{nRT}{P} = \frac{(1.0mol)(0.08206L \cdot atm / K \cdot mol)(308K)}{1.0atm} = 25.27L$$

2. The loading rate (Equation 2) given the measured flow rate ($Q = 155$ scfm from multiple wells) and effluent 1,1,1-TCA concentration ($C_{\max} = 860$ ppbv) can be calculated using:

$$L(\text{lbs} / \text{hr}) = Q(\text{ft}^3 / \text{min}) \cdot C(\text{ppbv}) \cdot \frac{1}{25.27} (\text{mol} / \text{L}) \cdot 133.40(\text{g} / \text{mol}) \cdot 60(\text{min} / \text{hr}) \cdot 28.32(\text{L} / \text{ft}^3) \cdot$$
$$2.205 \cdot 10^{-3} (\text{lbs} / \text{g}) = 155 \text{ft}^3 / \text{min} \cdot 860 \text{ppbv} \cdot \frac{1}{1 \cdot 10^9} \cdot 19.78(\text{lbs} \cdot \text{min} / \text{hr}) = 2.64 \cdot 10^{-3} \text{lbs} / \text{hr}$$

This loading rate was used to calculate the anticipated impacts from the effluent discharge as shown on Table 2.2.2.2. These impacts were then compared to the AGC and SGC for 1,1,1-TCA. These calculations were based on the configuration of the remaining neighboring structures (the former 592 Brook Street building has been removed due to fire damage), which have elevations similar to that of the former site building (an approximate 20 foot building height with a stack extending 5 feet above the roof line). All of the calculated impacts for 1,1,1-TCA based on these dimensions were found to be well below the AGC and SGC, as shown on Table 2.2.2.2. Therefore, based upon the calculations performed for the maximum 1,1,1-TCA concentration observed in the effluent, emissions generated from remediation activities do not require treatment. Therefore, no effluent treatment measures are necessary at this time. FPM will continue effluent monitoring of the system on a quarterly basis to ensure compliance.

2.3 AS/SVE System Operation and Maintenance

System operation and maintenance will be performed by FPM personnel on a quarterly basis to ensure proper system operation and emissions compliance. In addition, routine system operation checks will be performed monthly. The following is a summary of tasks to be performed to maintain the remediation system components and monitor the system operation:

Monthly Tasks:

- Perform system check and service moisture separator if needed;
- Read and record all system airflow rates, pressures, and vacuums.

Quarterly Tasks

- Collect effluent sample for laboratory analysis by EPA method T0-14 and PID screen to ensure emissions compliance.

TABLE 2.2.2.2
DAR-1 APPENDIX B CALCULATION FOR 1,1,1-TCA

II. Cavity Impact Evaluation Procedure

II.A. Basic cavity impact method

h_b = height of building = 20 feet

II.A.1.

$3h_b$ = 60 feet

D_{pl} = distance to property line = 10 feet

$D_{pl} < 3h_b$, therefore, cavity impacts are not confined to on-site receptors. Therefore, calculate cavity impacts.

II.A.2

h_c = building cavity height equals $1.5h_b$ = 30 feet

h_s = stack height = 25 feet

$h_s < h_c$, therefore, calculate worst-case cavity impacts.

II.A.3.

$Q_a = L$ (lbs/hr)*24 hrs/day*365 days/yr = 23.13 lbs/yr

C_c = Worst case annual cavity impact ($\mu\text{g}/\text{m}^3$) = $\frac{1.72Q_a}{h_b^2} = 0.10 \mu\text{g}/\text{m}^3 \ll \text{AGC (1,000 } \mu\text{g}/\text{m}^3)$

II.A.4.

$$C_{\text{CST}} = \frac{904,000 * L}{h_b^2} = 5.97 \mu\text{g}/\text{m}^3$$

II.C. Cavity impact evaluation method

$C_{\text{CST}} = 5.97 \ll \text{SGC (68,000 } \mu\text{g}/\text{m}^3)$

III.A. Standard point source method

III.A.1

$h_s/h_b = 25/20 = 1.25$, stack height to building height ratio for vertical stacks

Ratio is less than 1.5, therefore, assume no plume rise occurs and $h_e = h_s$

III.A.2

C_a = Maximum actual annual impact = $\frac{6.0 * Q_a}{h_e^{2.25}} = 0.16 \mu\text{g}/\text{m}^3 \ll \text{AGC (1,000 } \mu\text{g}/\text{m}^3)$

because Q_a is based on continuous operation, $C_a = C_p$.

III.A.3.

C_p = Maximum annual potential impact = $\frac{52,500 * L}{h_e^{2.25}} = 0.16 \mu\text{g}/\text{m}^3 \ll \text{AGC (1,000 } \mu\text{g}/\text{m}^3)$

III.A.4 Does not apply

III.A.5

$C_{\text{ST}} = \text{Maximum short term impact} = C_p * 65 = 10.4 \mu\text{g}/\text{m}^3 \ll \text{SGC (68,000 } \mu\text{g}/\text{m}^3)$

Semi-Annual Tasks:

- Perform groundwater monitoring at Site monitoring wells.

Remediation system performance and progress will continue to be evaluated on the basis of the SVE system emissions data and the semi-annual groundwater sampling results. Reporting will be performed as described in Section 4.3.

SECTION 3.0 HYDROGEN-RELEASING COMPOUND AND OXYGEN-RELEASING COMPOUND INJECTION

3.1 Offsite Hydrogen-Releasing Compound Injection

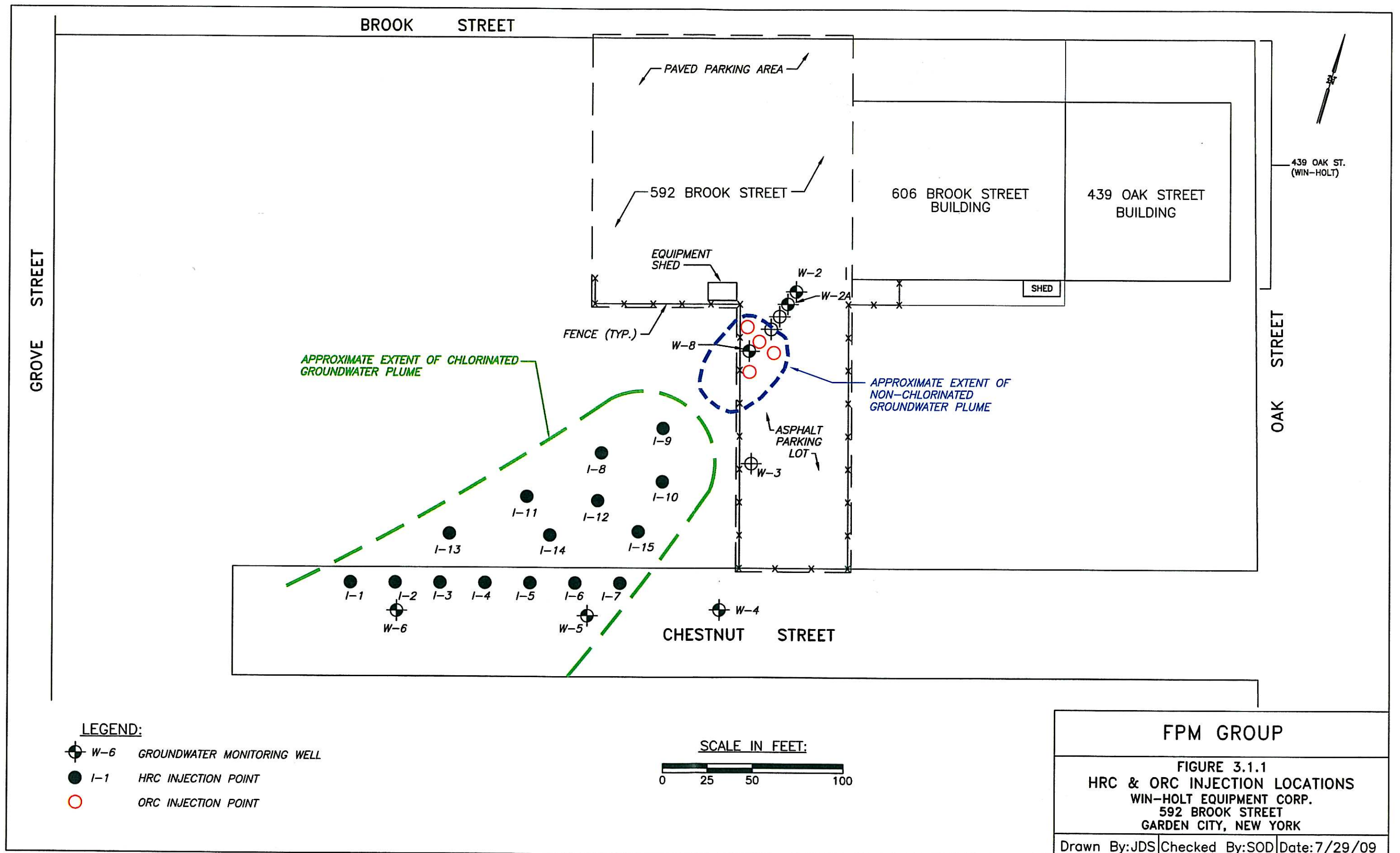
A plume of chlorinated VOCs in groundwater is present offsite and extends southwest from near the southwest boundary of the Site, as shown on Figure 3.1.1. Based on the historic groundwater monitoring data, the greatest concentrations of chlorinated VOCs were found in well W-6 located on Chestnut Street immediately southwest of the Site. Only low concentrations of chlorinated VOCs were noted further downgradient in well W-7 on Grove Street. Chlorinated VOCs were very low to non-detect in the onsite wells. Injection of Hydrogen-Releasing Compound-Advanced (HRC) was selected as the remedial method to address the offsite plume of chlorinated VOCs in groundwater.

Injection of HRC was performed in April 2007 in the area and upgradient of well W-6, as shown in Figure 3.1.1. HRC was injected via a direct-push rig from 4 to 14 feet below the water table surface (25 to 35 feet below grade) at 15 locations, I-1 through I-15. At each location, the probe was installed to a depth of 35 feet below grade and the HRC was pumped into the subsurface using a grout pump. The probe was gradually pulled up during pumping so as to evenly distribute the HRC throughout the target interval. A total of 1,405 pounds (approximately 90 pounds per location) of HRC was injected, which was the maximum amount that could be injected given the subsurface conditions. This is somewhat less than the 1,530 pounds of HRC targeted for injection, as described in the RAWP. The data from the ongoing groundwater monitoring were used to evaluate if additional HRC injection is necessary, as discussed in Sections 4 and 5 herein.

3.2 Onsite Oxygen-Releasing Compound Injection

Oxygen-Releasing Compound-Advanced (ORC) was injected onsite in the vicinity of well W-8 to provide for supplemental treatment of the onsite non-chlorinated VOC groundwater plume. This injection was performed in accordance with the January 24, 2007 ORC Injection Work Plan, as approved by the NYSDEC on February 26, 2007.

Injection of ORC was performed in April 2007 under NYSDEC supervision at four onsite locations in the immediate vicinity of well W-8, as shown on Figure 3.1.1. At each location, approximately 44 pounds of ORC was injected from 0 to 8 feet below the water table surface (21 to 29 feet below grade) using a direct-push rig. The probe was installed to a depth of 29 feet below grade at each location. The ORC was mixed with the appropriate amount of water and pumped into the



formation using a grout pump. The probe was then gradually pulled up during pumping so as to evenly distribute the ORC throughout the target interval. The amount of ORC injected was somewhat more than the 40 pounds per injection point targeted in the ORC Injection Work Plan, but less than the total amount of ORC calculated to be needed to address the targeted onsite area of impacted groundwater. However, as discussed above, the ROI of the onsite AS wells is greater than calculated during the pilot test and completely overlaps the area of the onsite plume, which eliminates the need for additional ORC. The results of the ongoing groundwater monitoring were used to evaluate the progress of onsite groundwater remediation.

SECTION 4.0

GROUNDWATER MONITORING AND QUALITY ASSURANCE PROCEDURES

Groundwater monitoring was performed in late January 2008 immediately prior to the startup of the AS/SVE system and after the April 2007 injections of HRC and ORC. An additional round of groundwater monitoring was performed in October 2008. Groundwater monitoring and quality assurance/quality control (QA/QC) procedures and results from January 2008 and October 2008 are documented in this section. A site plan showing the groundwater monitoring well locations is presented on Figure 4.1.

Groundwater monitoring will continue to be performed on a semi-annual basis at this Site to evaluate the performance of the remedial measures. Groundwater monitoring and QA/QC procedures will be performed as described in this section.

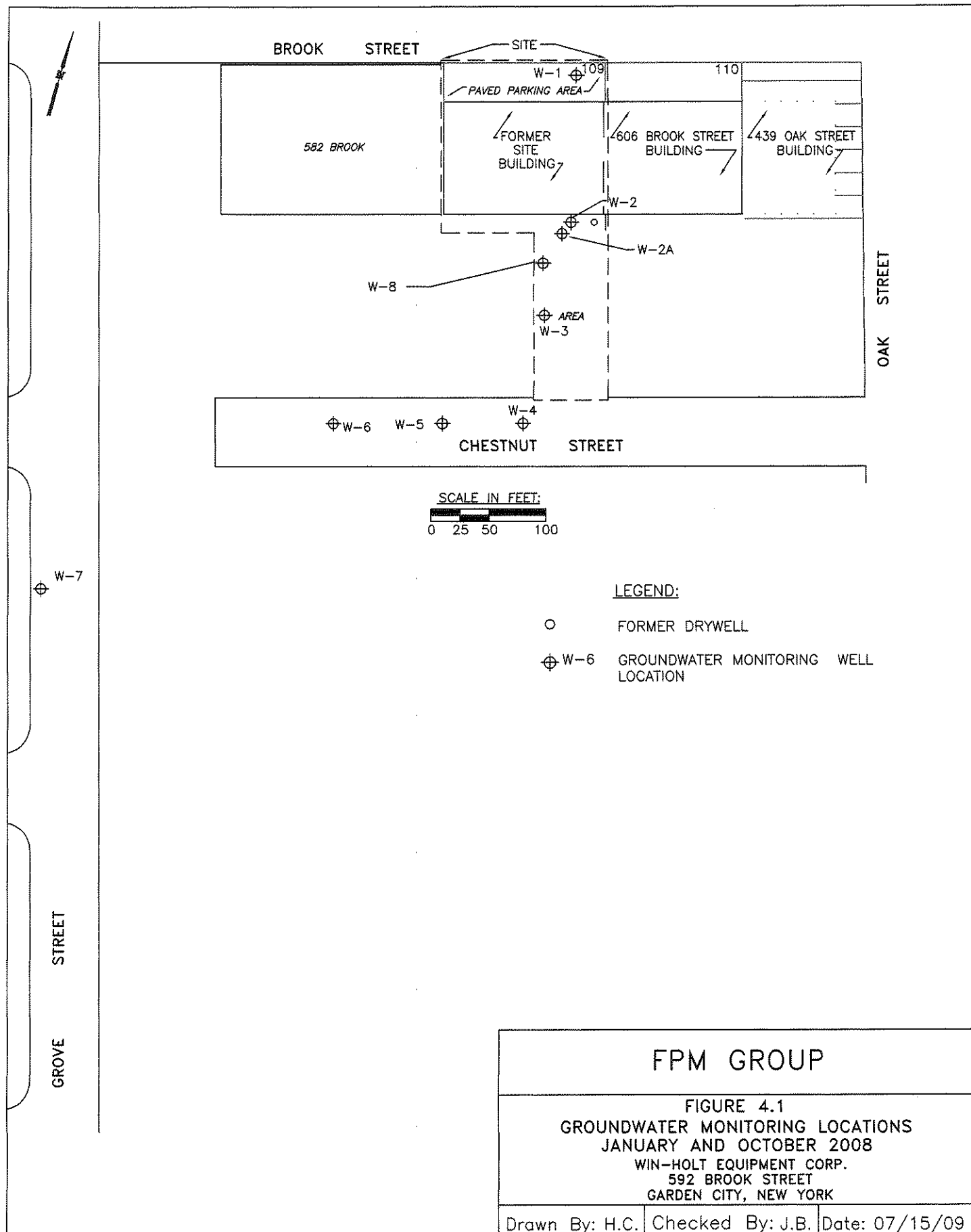
4.1 Groundwater Monitoring Procedures and Results

Groundwater sampling was performed on January 30, 2008 and October 10, 2008. Eight wells were sampled during each sampling event, including MW-2, MW-2A, and MW-3 through MW-8. Upgradient well W-1 was not sampled as previous sampling events have showed very low or no detections of VOCs.

4.1.1 Groundwater Monitoring Procedures

The sampling procedures were in accordance with the RAWP. The depth to water was measured at each well with a water level indicator and recorded to the nearest 0.01 foot. A decontaminated submersible pump with dedicated polyethylene tubing was used to purge a minimum of three casing volumes of water from each well. All non-disposable equipment that entered the well was decontaminated with a low-phosphate detergent and potable water wash followed by a distilled water rinse prior to use.

Following the removal of each casing volume, field parameters, including pH, turbidity, specific conductivity, and temperature were monitored. Stability was achieved when all stability parameters varied less than 10 percent between the removal of successive casing volumes and after at least three casing volumes have been removed. Upon achievement of stability, a water sample was obtained from each well using a dedicated disposable bailer.



Samples were placed into laboratory-provided sample containers. Each sample container was labeled with the location, well number, date and time of sampling, and analysis to be performed. The labeled sample containers were then placed in laboratory-supplied coolers with ice to depress the temperature to four degrees Celsius. A chain-of-custody form was filled out and kept with the samples in the coolers to document the sequence of sample possession. The sample coolers were delivered by an overnight courier to the selected laboratory, TestAmerica Laboratories, Inc. of Connecticut. The groundwater samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) using EPA SW846 Method 8260B.

4.1.2 Groundwater Monitoring Results

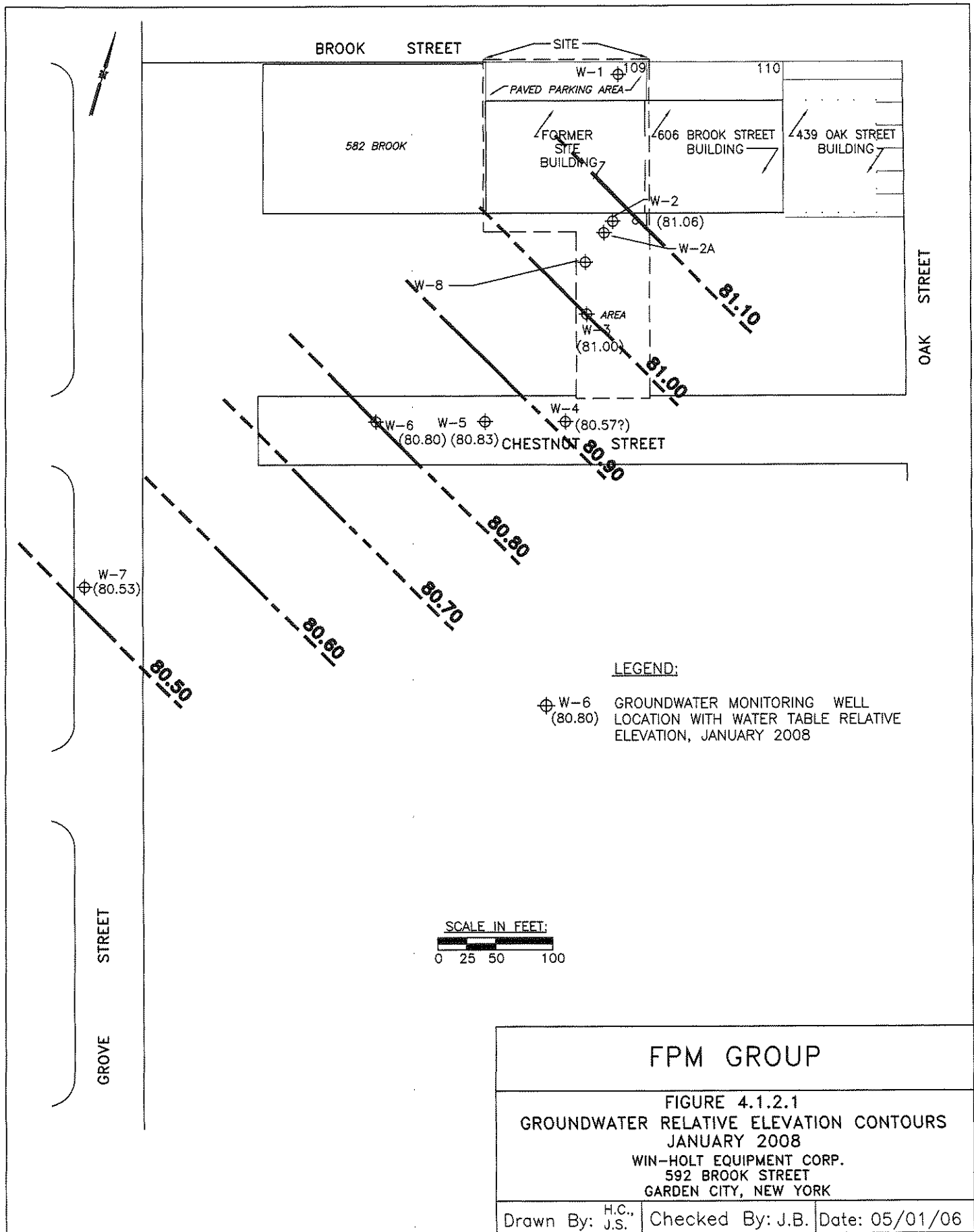
The depth-to-water measurements for each sampling event were integrated with the top-of-casing relative elevation data to evaluate the groundwater flow direction. Figure 4.1.2.1 shows the data for January 30, 2008 and Figure 4.1.2.2 shows the data for October 10, 2008. The groundwater flow direction during the pre-AS/SVE system monitoring (January 2008) and post-AS/SVE system monitoring (October 2008) is consistently to the southwest. This flow direction is also consistent with historic groundwater flow direction information and with the shape of the groundwater plumes, as shown on Figure 4.1.2.3 (January 2008 data) and Figure 4.1.2.4 (October 2008 data). Groundwater flow directions will continue to be evaluated during future monitoring events, as discussed in Section 4.3.

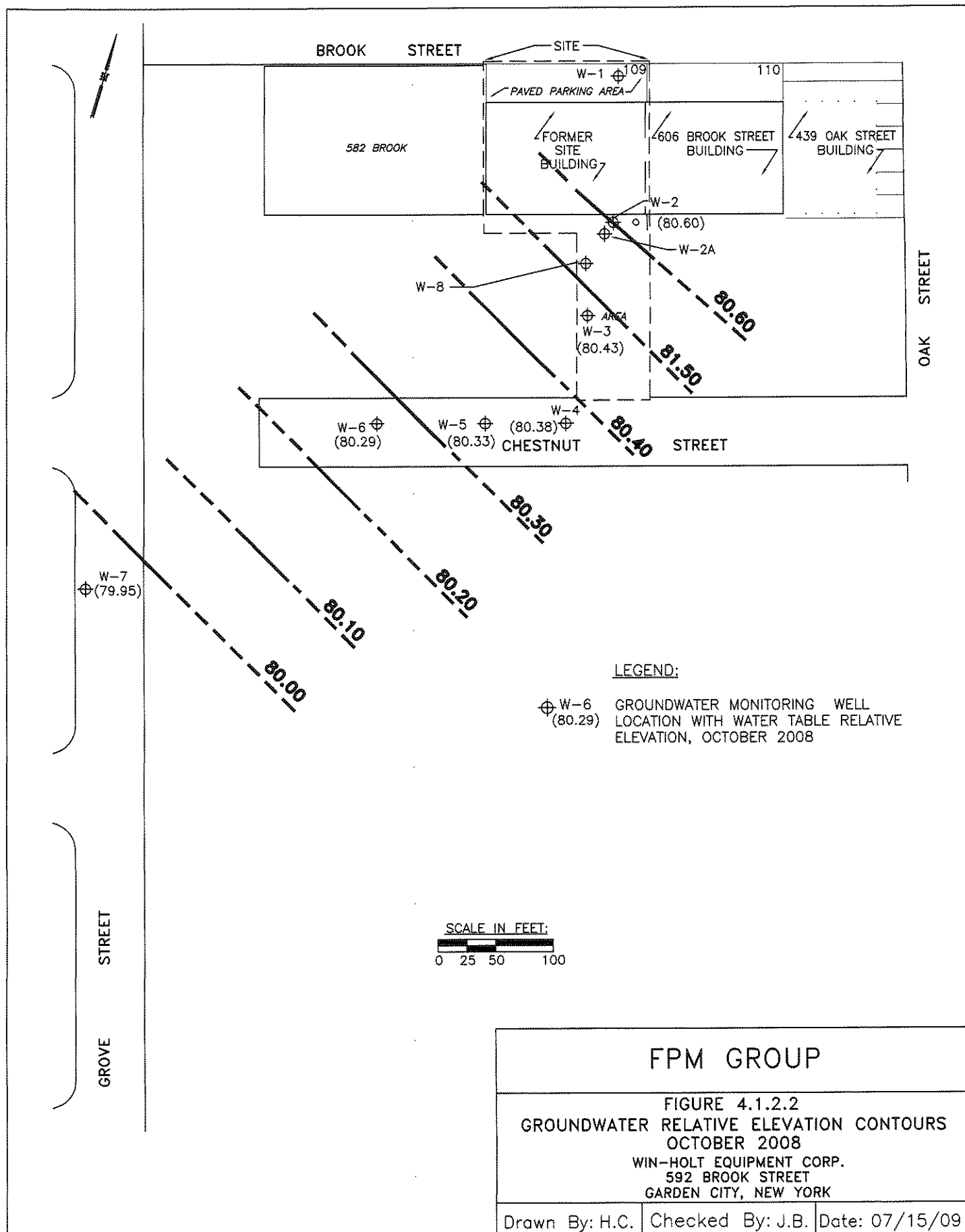
Table 4.1.2.1 shows the summarized current and historic groundwater data. The laboratory reports for both sampling events are included in Attachment D. The results from each monitoring event are as follows:

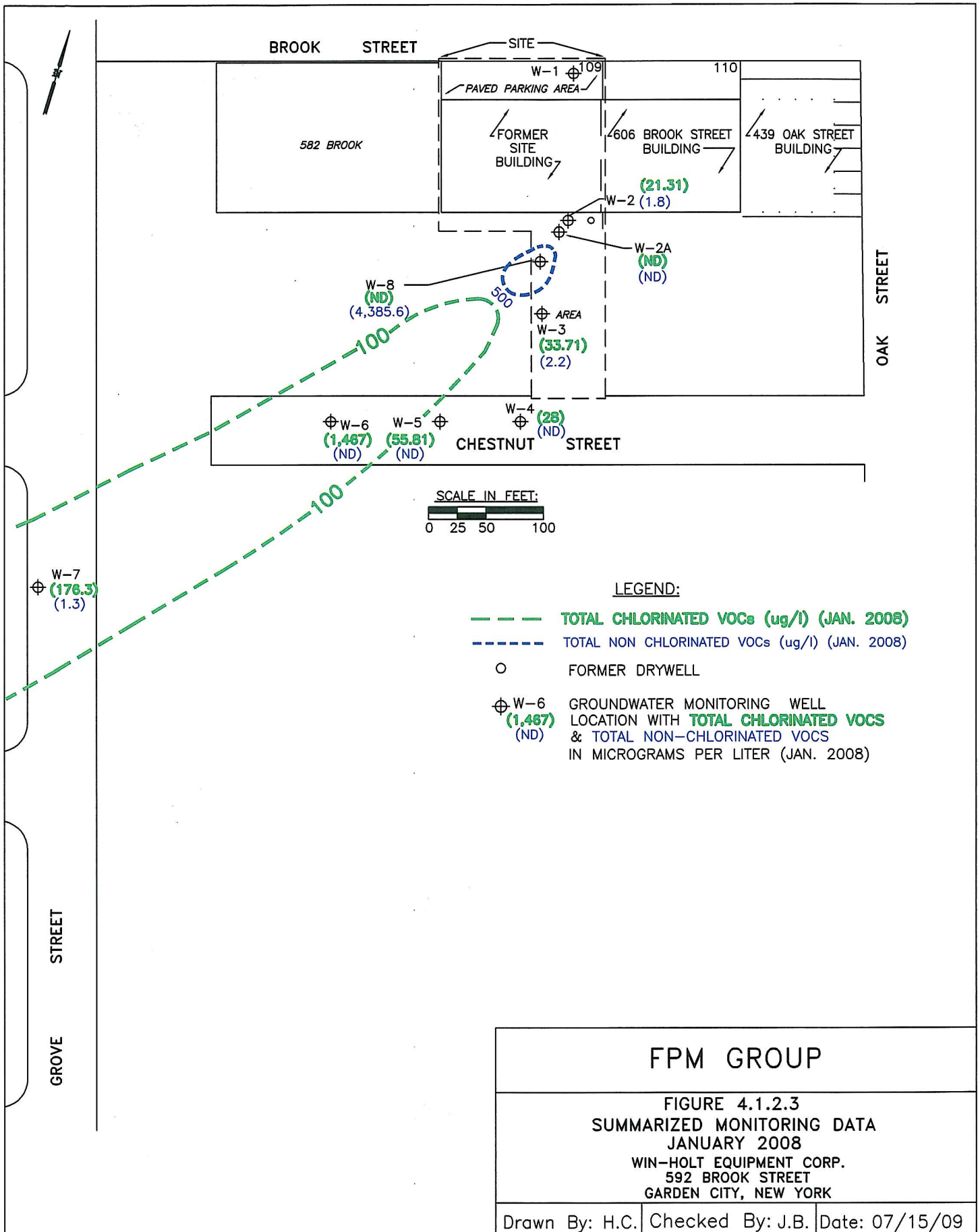
January 2008 Groundwater Monitoring Results

Well W-8, located in close downgradient proximity to the source area, contained concentrations of non-chlorinated VOCs (primarily xylenes) exceeding the NYSDEC Class GA Ambient Water Quality Standards (Standards). Total non-chlorinated VOC concentrations in all of the other sampled wells were either very low or non-detect; no exceedances of the NYSDEC Standards for any non-chlorinated VOCs were noted in any of the other Site wells. The distribution of non-chlorinated VOCs in groundwater in January 2008 is shown in blue on Figure 4.1.2.3.

Total chlorinated VOCs were found at low concentrations (non-detect to 21.31 micrograms per liter, or ug/l) in proximal wells W-8, W-2 and W-2A. None of the VOC detections exceeded their NYSDEC Standard except for TCE at well W-2. Low concentrations (28 to 33.71 ug/l) of total







FPM GROUP

FIGURE 4.1.2.3
SUMMARIZED MONITORING DATA
JANUARY 2008
WIN-HOLT EQUIPMENT CORP.
592 BROOK STREET
GARDEN CITY, NEW YORK

Drawn By: H.C. | Checked By: J.B. | Date: 07/15/09

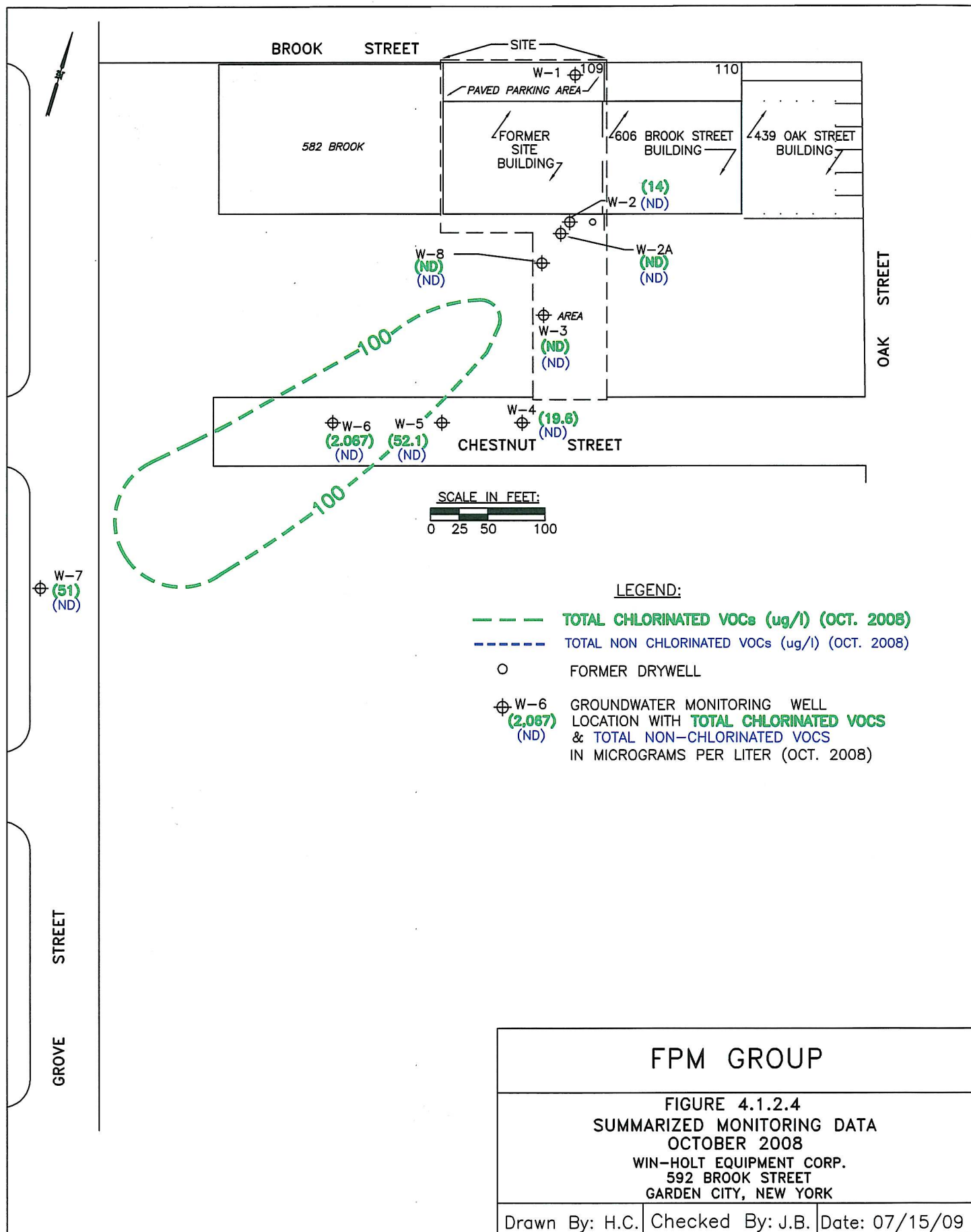


TABLE 4.1.2.1
SUMMARY OF GROUNDWATER SAMPLING RESULTS
WIN-HOLT EQUIPMENT CORPORATION
592 AND 606 BROOK STREET, GARDEN CITY, NEW YORK

Sample Location	W-2									W-2A				W-3								W-4								NYSDEC Class GA Ambient Water Quality Standards
Sample Depth (In feet)	24-34									55-60				24-34								24-34								
Sample Date	2/3/99	2/12/01	6/12/01	4/17/03	10/1/03	12/8/05	8/24/06	1/30/08	10/10/08	12/8/05	8/24/06	1/30/08	10/10/08	2/3/99	6/18/01	4/17/03	10/1/03	12/8/05	8/24/06	1/30/08	10/10/08	2/3/99	2/12/01	4/17/03	10/1/03	12/8/05	8/24/06	1/30/08	10/10/08	
Volatile Organic Compounds in micrograms per liter																														
Carbon Tetrachloride	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	5
1,1,1-Trichloroethane	NA	170	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	3	11	4 J	ND	ND	ND	ND	NA	5	12	6	3.6 J	ND	ND	8.6	5
1,1-Dichloroethane	NA	290	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1	13	5 J	ND	ND	ND	ND	NA	ND	1 J	ND	ND	ND	ND	ND	5
1,1-Dichloroethylene	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	5
1,2,4-Trimethylbenzene	NA	94	140	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	5
1,2-Dichloroethylene (total)	NA	23(cis)	35(cis)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	2(cis)	4 J(cis)	3 J(cis)	ND	ND	ND	ND	NA	ND	3 J(cis)	ND	ND	ND	2 J	ND	5
1,3,5-Trimethylbenzene	NA	28	80	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	5
1,2-Dichloroethane	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.6
Chloroethane	NA	5	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	5
Ethylbenzene	9,000	5,600	4,700	210	1,100	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	9	ND	ND	ND	ND	ND	ND	ND	5
Isopropylbenzene	NA	13	17	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	5
Methylene Chloride	NA	NA	NA	21 JB	240 JB	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND B	ND	ND	ND	ND	NA	NA	ND	ND B	ND	ND	ND	ND	5
Naphthalene	NA	1	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	10
n-Butylbenzene	NA	1	3	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	5
n-Propylbenzene	NA	15	19	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	5
Xylenes (total)	47,000	31,100	38,000	7,100	47,000	29	6.3	1.8 J	ND	160	3.5 J	ND	ND	12	ND	7	ND	ND	7.4	2.2 J	ND	56	ND	ND	ND	ND	5.2	ND	ND	5
sec-Butylbenzene	NA	1	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	5
tert-Butylbenzene	NA	12	23	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	ND	5
Tetrachloroethylene	NA	11	8	ND	ND	0.57 J	ND	0.31 JM	ND	0.84 J	0.54 J	ND	ND	NA	ND	2 J	1 J	ND	ND	0.71 J	ND	NA	1	2 J	0.9 J	ND	ND	ND	ND	5
Toluene	51,000	12,000	12,000	180	440 J	0.65 J	ND	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	5
Trichloroethylene	NA	100	ND	21 J	ND	22	8.3	21.0	14	1.5 J	1.1 J	ND	ND	NA	28	22	16	2.6 J	19	33	ND	NA	52	42	16	16	6.1	26	11	5
Total Chlorinated VOCs	NA	599	353	21	ND	22.57	8.3	21.31	14	2.34	1.64	ND	ND	NA	34	52	29	2.6	19	33.71	ND	NA	58	60	22.9	19.6	6.1	28	19.6	-
Total *Non-Chlorinated VOCs	107,000	48,865	54,982	7,490	48540	29.65	6.3	1.8	ND	160	3.5	ND	ND	17	ND	7	ND	ND	7.4	2.2	ND	82	ND	ND	ND	ND	5.2	ND	ND	-

Notes:

ND = Not detected.
NA = Not analyzed.
J = Result is an estimated value below the reporting limit.
H = Alternate peak selection upon analytical review.

B = Compound was detected in an associated blank sample.
*Includes petroleum VOCs only.
Bold and shaded values indicate exceedance of NYSDEC Class GA Ambient Water Quality Standard.
Totals omit suspected lab contaminants.

TABLE 4.1.2.1 (CONTINUED)
SUMMARY OF GROUNDWATER SAMPLING RESULTS
WIN-HOLT EQUIPMENT CORPORATION
592 AND 606 BROOK STREET, GARDEN CITY, NEW YORK

Sample Location	W-5								W-6								W-7						W-8				NYSDEC Class GA Ambient Water Quality Standards
Sample Depth (in feet)	24-34								24-34								37-47						24-34				
Sample Date	2/3/99	2/12/01	4/17/03	10/1/03	12/8/05	8/24/06	1/30/08	10/10/08	2/12/01	6/12/01	4/17/03	10/1/03	12/8/05	8/24/06	1/30/08	10/10/08	4/17/03	10/1/03	12/8/05	8/24/06	1/30/08	10/10/08	12/8/05	8/24/06	1/30/08	10/10/08	
Volatile Organic Compounds in micrograms per liter																											
Carbon Tetrachloride	NA	NA	ND	39	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,1-Trichloroethane	NA	140	320	190	31	14	55	50	3,400	5,400	1,700	2,900	750	1,800	1,400	2,000	250	20	80	62	170	48	ND	ND	ND	ND	5
1,1-Dichloroethane	NA	5	5 J	3 J	ND	ND	ND	ND	76	97	53	70 J	10 J	ND	35 J	36 J	6 J	10	3.3 J	2.9 J	ND	ND	ND	ND	ND	ND	5
1,1-Dichloroethylene	NA	ND	4 J	2 J	ND	ND	ND	ND	52	34	26 J	35 J	8.6 JH	17 J	32 J	31 J	10	0.9 J	3.5 J	1.9 J	6.3 J	1.6 J	ND	ND	ND	ND	5
1,2,4-Trimethylbenzene	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2-Dichloroethylene (total)	NA	ND	ND	ND	ND	ND	ND	ND	2(cis)	ND	ND	ND	ND	ND	ND	ND	2 J(cis)	4 J(cis)	ND	ND	ND	ND	ND	ND	ND	ND	5
1,3,5-Trimethylbenzene	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2-Dichloroethane	NA	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
Chloroethane	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Ethylbenzene	241	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,200	1,700	380	ND	5
Isopropylbenzene	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	5
Methylene Chloride	NA	NA	2 JB	ND B	ND	ND	ND	ND	NA	NA	20 JB	54 JB	10 JB	12 JB	ND	ND B	1 JB	ND	ND	ND	ND	ND	370 JB	20 J	ND	ND	5
Naphthalene	NA	ND	NA	NA	ND	ND	ND	ND	2	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	10
n-Butylbenzene	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	5
n-Propylbenzene	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	5
Xylenes (total)	777	ND	ND	5 J	ND	3.0 J	ND	ND	1	79	ND	ND	ND	ND	ND	ND	2 J	ND	ND	2.1 J	1.3 J	ND	17,000	18,000	4,000	ND	5
sec-Butylbenzene	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	5
tert-Butylbenzene	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	5
Tetrachloroethylene	NA	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0 J	0.56 J	ND	ND	ND	ND	ND	ND	5
Toluene	164	ND	ND	ND	ND	ND	ND	ND	1	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	490 J	220	5.6 J	ND	5
Trichloroethylene	NA	20	3 J	2 J	1.8 J	2.1 J	0.81 J	2.1 J	32	31	11 J	ND	ND	ND	ND	ND	5 J	9	1.1 J	ND	ND	ND	ND	ND	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	ND	ND	5
Total Chlorinated VOCs	NA	165	332	236	32.8	16.1	55.81	52.1	3,565	5,531	1,790	3,005	768.6	1,817	1,467	2,067	273	43.9	88.9	67.36	176.3	51.0	ND	ND	ND	ND	-
Total *Non-Chlorinated VOCs	1,182	ND	ND	5	ND	3.0	ND	ND	4	105	ND	ND	ND	ND	ND	ND	2	ND	ND	2.1	1.3	ND	18,690	19,920	4,385.6	ND	-

Notes:

ND = Not detected.

NA = Not analyzed.

J = Result is an estimated value below the reporting limit.

H = Alternate peak selection upon analytical review.

B = Compound was detected in an associated blank sample.

*Includes petroleum VOCs only.

Bold and shaded values indicate exceedance of NYSDEC Class GA Ambient Water Quality Standard.

Totals omit suspected lab contaminants.

chlorinated VOCs were detected in crossgradient wells W-3 and W-4; none of these detections exceeded their NYSDEC Standard except for TCE (at a level somewhat exceeding the NYSDEC Standard) in both wells. Total chlorinated VOCs were detected at 1,467 ug/l in downgradient well W-6; three chlorinated VOCs (primarily 1,1,1-TCA) were noted to exceed their NYSDEC Standards. Further downgradient, at well W-7 the total chlorinated VOC concentration was significantly lower (176.3 ug/l); two chlorinated VOCs (primarily 1,1,1-TCA) were noted to exceed their Standards. The distribution of chlorinated VOCs in groundwater in January 2008 is shown in green on Figure 4.1.2.3.

October 2008 Groundwater Monitoring

Non-chlorinated VOCs for the October 2008 monitoring event were non-detect at all of the wells sampled.

No chlorinated VOCs were detected in any of the onsite wells (W-2, W-2A, W-3, and W-8) with the exception of a low concentration of TCE (14 ug/l) in well W-2, which slightly exceeds the Standard.

A low concentration (19.6 ug/l) of total chlorinated VOCs was detected in crossgradient well W-4; the concentrations of 1,1,1-TCA (8.6 ug/l) and TCE (11 ug/l) slightly exceeded their NYSDEC Standards. A low concentration (52.1 ug/l) of total chlorinated VOCs was detected in downgradient well W-5; the concentration of 1,1,1-TCA (50 ug/l) was noted to exceed its NYSDEC Standard. Total chlorinated VOCs were detected at 2,067 ug/l in downgradient well W-6; three chlorinated VOCs (primarily 1,1,1-TCA) were noted to exceed their NYSDEC Standards. Further downgradient, at well W-7 the total chlorinated VOC concentration was significantly lower (51.0 ug/l); the concentration of 1,1,1-TCA was noted to exceed its NYSDEC Standard. The distribution of chlorinated VOCs in groundwater in January 2008 is shown in green on Figure 4.1.2.4.

4.1.3 Groundwater Monitoring Discussion

The January and October 2008 groundwater data were compared to the historic groundwater data, as shown in Table 4.1.2.1.

In proximity to the source area, both wells W-2 and W-2A show significantly declining levels of non-chlorinated VOC concentrations since December 2005. Non-chlorinated VOCs in these two wells are presently non-detect. Chlorinated VOCs in these wells are also non-detect or generally low, with the only exception being TCE in well W-2, which has fluctuated at a low level (up to 22 ug/l) since 2005. It is anticipated that continued operation of the AS/SVE system will further reduce the remaining TCE at well W-2.

At well W-8, slightly downgradient of the source area and within the treatment zone for the ORC injections, total chlorinated VOCs have not been detected during the past three monitoring events. Total non-chlorinated VOC concentrations in well W-8 have shown a significant decline from 19,920 ug/l in August 2006 to non-detect in October 2008. Based on these data, non-chlorinated VOCs in this well appear to have been eliminated by the ORC injections and are no longer a concern.

At crossgradient wells W-3 and W-4, both chlorinated and non-chlorinated VOCs have generally remained low to non-detect since at least 2003. The only exception is TCE, which has fluctuated at a level somewhat exceeding its NYSDEC Standard. However, the concentration of TCE at well W-3 was non-detect during the most recent sampling.

At downgradient well W-5, total chlorinated VOC concentrations have generally remained low since 2005, with the only VOC continuing to exceed its NYSDEC Standard being 1,1,1-TCA. At downgradient well W-6, near the centerline of the plume, total chlorinated VOC concentrations have shown little change since 2006. Both of these wells are just south (downgradient) of the area of HRC injections. However, the HRC does not appear to have yet made a significant impact on chlorinated VOC concentrations. Additional HRC injections are planned for the area upgradient of wells W-5 and W-6, as outlined in Section 5.0.

At the furthest downgradient well (W-7), total chlorinated VOC concentrations have declined since remediation began. Non-chlorinated VOC concentrations at well W-7 have remained low to non-detect since sampling began at this well in 2003 and were most recently non-detect.

4.1.4 Groundwater Monitoring Conclusions

The most recent groundwater monitoring data indicate that non-chlorinated VOC concentrations are non-detect at all of the wells sampled and, therefore, the non-chlorinated VOC plume has been eliminated. This improvement is most likely in response to ORC injections in this area and the operation of the remediation system. Based on these data, non-chlorinated VOC-impacted groundwater is no longer a concern. The ongoing groundwater monitoring program will continue to assess this condition.

A plume of chlorinated VOC-impacted groundwater remains present downgradient of the site. With the exception of a very low concentration of TCE in well W-2, exceedances of the NYSDEC Standards for chlorinated VOCs were noted only in downgradient wells W-4 through W-7 in October 2008. The most concentrated portion of the plume exists in the vicinity of well W-6. Concentrations further downgradient at well W-7 have remained relatively low and have decreased somewhat since

remediation was initiated. It is anticipated that additional HRC injections planned for the area upgradient of wells W-5 and W-6 will further reduce chlorinated VOCs in the vicinity of wells W-5 and W-6.

Groundwater monitoring will continue to be performed at the Site on a semi-annual basis in accordance with the procedures described in this section.

4.2 Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) protocols included several types of procedures to assure the quality of the analytical data collected. The QA/QC procedures utilized during groundwater monitoring activities at the Site are described in the following sections.

4.2.1 Sampling Equipment Decontamination Procedures

All non-disposable equipment (i.e., water level indicator and pump) used during the groundwater purging activities was decontaminated prior to use at each location to prevent cross contamination. For groundwater sampling, dedicated disposable bailers were used. All non-disposable equipment was decontaminated according to the procedures outlined in the RAWP.

4.2.2 Chain-of-Custody Procedures

For each day of sampling, a chain-of-custody form was completed and submitted to the laboratory. A copy of the chain-of-custody form was also retained by FPM for sample tracking purposes. The chain-of-custody form included the project name, the sampler's signature, the types and sizes of sample bottles and preservatives used, the sampling locations, intervals, and the analytical parameters and methods requested.

4.2.3 QA/QC Samples

Several types of QA/QC samples were obtained during the groundwater sampling performed in January and October 2008. The results were utilized to evaluate the accuracy and precision of the laboratory data.

Equipment blank samples were collected each day to evaluate the effectiveness of decontamination procedures. Sample FB was collected on January 30, 2008 and sample W-6E was collected on October 10, 2008. The samples consisted of an aliquot of laboratory-supplied water poured over the dedicated or decontaminated sampling equipment and then submitted to the laboratory for analysis. The laboratory results indicate that only a low estimated concentration of methylene

chloride was detected in sample FB, and only a low estimated concentration of acetone was detected in sample W-6E. These analytes are common laboratory contaminants and the low detections are likely laboratory-related. Neither analyte was detected in any of the primary environmental samples. Therefore, equipment decontamination procedures appeared to be effective.

A trip blank sample was included with the samples during each event to evaluate the potential for VOC cross-contamination between samples in the same cooler. Each trip blank sample consisted of an aliquot of laboratory water sealed in sample bottles at the laboratory transported to the field with the empty sample bottles. The laboratory results indicate that only a very low concentration of methylene chloride was detected in the trip blank sample for January 30, 2008; as discussed above, the methylene chloride is likely a laboratory containment. Methylene chloride was not detected in any of the primary samples. Therefore, cross-contamination is not a concern.

A duplicate groundwater sample (W-8D) was collected from well W-8 during each monitoring event to attest to the precision of the laboratory. The duplicate samples consisted of a separate aliquot of sample collected at the same time, in the same manner, and analyzed for the same parameters as the primary environmental sample. The laboratory results for both samples on each date are comparable and, therefore, laboratory analyses appear to be sufficiently precise.

Method blank samples were analyzed by the lab in association with the groundwater samples to assess the potential for laboratory contamination. Acetone and methylene chloride, both common laboratory contaminants, were detected at low estimated concentrations. However, neither one of these analytes were detected in any of the primary samples. Therefore, these detections do not present a concern.

Matrix spike/matrix spike duplicate (MS/MSD) groundwater samples were collected at well W-6 on January 30, 2008 and at well W-2A on October 10, 2008 to confirm the accuracy and precision of laboratory results based on a particular matrix. The following observations are noted for each sampling event:

- The MS/MSD results for January 2008 indicate that the compound percent recoveries (%R) were within acceptable guidelines with the exception of bromomethane, 1,1,1-TCA and vinyl chloride in the MS and MSD samples. The 1,1,1-TCA %R was low in both the MS and MSD samples. Therefore, the associated sample results may be biased low. However, the laboratory control spike (LCS) %R results for 1,1,1-TCA were within control limits and, therefore, any variation in the 1,1,1-TCA results may be matrix-related rather than lab-related. The 1,1,1-

TCA results for the primary samples did not appear unusually low relative to historic results and, therefore, this may not be a concern. The bromomethane and vinyl chloride %R were high in both the MS and MSD samples and, therefore, the sample results for the associated primary samples may be biased high. However, since these two VOCs were not detected in any of the primary samples, the dataset should not be affected.

- The MS/MSD results for October 2008 indicate that the compound percent recoveries (%R) were within acceptable guidelines with the exception of chloroethane in the MS and MSD samples. The %R was low in both the MS and MSD samples. Therefore, the associated sample results may be biased low. However, since this analyte is typically not detected at this site, the dataset should not be affected.

4.3 Groundwater Monitoring and Reporting Schedule

In general, groundwater monitoring will be performed during the first quarter and in the third quarter of each calendar year until the AS/SVE system is shut down (following shutdown approval by the NYSDEC). Following system shutdown, FPM will increase the groundwater sampling to quarterly. If, after four quarters of ground water monitoring, no increase in downgradient groundwater VOC concentrations is noted relative to the VOC concentrations at system shutdown, then a request for termination of system operation and groundwater monitoring may be made.

Groundwater monitoring will generally be performed at all Site-related monitoring wells during each monitoring event with the exception of well MW-1. Well MW-1 is located upgradient of the Site and has been used periodically to evaluate whether potential upgradient sources affect onsite groundwater. However, no upgradient impacts have been identified to date. Well MW-1 may be monitored in the future if needed to assess potential impacts from upgradient offsite sources. Reductions in the number of wells monitored may be made as groundwater conditions improve. Any proposed changes in the groundwater program will be requested in the periodic groundwater monitoring reports, as described below.

All groundwater samples will be analyzed for TCL VOCs using EPA SW846 Method 8260B. The analytical laboratory will be NYSDOH-certified and reporting will include Category B deliverables. QA/QC protocols will be as described in Section 4.2 above.

Groundwater monitoring and remediation system performance reports will be prepared on an annual basis. It is anticipated that these reports will be submitted during the fourth quarter of each calendar year. An interim system performance report will be prepared each quarter after the system

analytical data are received and verified. These interim reports will include the system performance and analytical data and a brief assessment of the results.

SECTION 5.0 ASSESSMENT OF REMEDIAL ACTION OBJECTIVES AND ADDITIONAL REMEDIAL ACTION

5.1 Remedial Action Objectives Evaluation

As discussed in Section 4.3.1 of the RAWP (FPM, June 1995), several remedial action objectives (RAOs) have been established for this Site. The remedial measures, as currently implemented, have been evaluated with respect to their potential for achieving the RAOs, as discussed below. Activities to be conducted to meet the RAOs are also discussed. Progress towards achieving each of the RAOs is evaluated as follows:

- **Eliminate or reduce, to the extent practicable, VOC contamination in onsite and offsite groundwater.** The AS/SVE system, as designed and installed, and the ORC injections, appear to have sufficiently reduced impacts to onsite groundwater. Groundwater monitoring performed since the ORC injections in April 2007 and the startup of the remediation system has shown a significant decrease in onsite VOC contamination; groundwater VOC impacts are no longer present in the onsite wells based on the most recent groundwater data, with the exception of a low concentration of one chlorinated VOC in one well. Therefore, this RAO has been achieved for the onsite groundwater.

The HRC injections performed in April 2007 were intended to reduce impacts to offsite groundwater. As discussed in Section 4.1.4, groundwater monitoring downgradient of the HRC injection area in the centerline of the plume has not yet shown a significant effect on offsite groundwater quality, although reductions in chlorinated VOC concentrations have been observed in more peripheral areas of the plume. Additional HRC injections are planned for the area upgradient of wells W-5 and W-6, as discussed below. It is anticipated that the additional HRC injections will further reduce the chlorinated VOC plume. Achievements of this RAO for the offsite groundwater will be further evaluated following the additional injection of HRC and completion of additional groundwater monitoring.

- **Eliminate or reduce, to the extent practicable, offsite migration of contaminants in groundwater.** Well MW-8 was installed specifically to assess the effectiveness of the AS/SVE system at addressing potential offsite migration of groundwater contaminants. As discussed above, monitoring results from well MW-8 have shown nearly complete elimination of onsite groundwater contamination following the ORC injections and the startup of the AS/SVE system.

The most recent groundwater monitoring results indicate that no VOCs were detected in the onsite wells with the exception of a low concentration of TCE in well W-2. Operation of the AS/SVE system is anticipated to further reduce or eliminate the potential for offsite contamination migration; therefore, this RAO is considered to be achieved. Groundwater monitoring will be continued to confirm that VOC concentrations in onsite groundwater remain low to non-detect to further document the achievement of this RAO.

- **Attain, to the extent practicable, ambient groundwater quality standards.** With respect to the remaining residual onsite groundwater impacts, the AS/SVE system is designed to treat the remaining source material as well as the impacted groundwater. The ORC injections were successful in supplementing the treatment of the onsite impacted groundwater. Groundwater monitoring performed following the ORC injections and startup of the AS/SVE system has indicated that the treatment has been successful; only one chlorinated VOC was detected slightly above the NYSDEC Standard in one onsite well during the most recent monitoring event. No non-chlorinated VOCs were detected onsite or offsite. Continued operation of the AS/SVE system is anticipated to further reduce the remaining minor groundwater impact onsite and achieve this RAO. Groundwater monitoring will be continued, as described herein, to continue to monitor achievement of this RAO.

With respect to the offsite groundwater plume, as described in the RAWP the approved remedy (HRC injection) is intended to address the portion of the plume exhibiting the highest concentrations of VOCs. Groundwater monitoring performed following HRC injection indicates that groundwater impacts at the centerline of the plume have remained relatively unchanged. It appears that an additional HRC injection is necessary to further treat offsite chlorinated VOC-impacted groundwater and achieve this RAO to the extent practicable. Additional groundwater monitoring will be performed following the additional HRC injection to further evaluate the anticipated reduction in offsite groundwater impacts.

- **Evaluate the potential for vapor intrusion beneath the Site building and mitigate identified impacts.** Two sub-slab monitoring points (MP-1 and MP-2) were installed beneath the Site building and sampled in February 2006. Indoor air sampling was performed at the same time. The results were documented in our February 7, 2007 report and indicated that mitigation would be required for TCE. The Site building was subsequently destroyed by a lightning-triggered fire on July 4, 2006 and has not been reconstructed. The location of the former Site building is now used as a parking area and there are no plans for development of a

building at the Site. Therefore, mitigation is not warranted at this time. Nevertheless, operation of the SVE portion of the remediation system has resulted in development of an ROI that extends to at least MP-1 (see Section 2.2.1 herein). Therefore, soil vapors in this area are being mitigated and this RAO is being addressed.

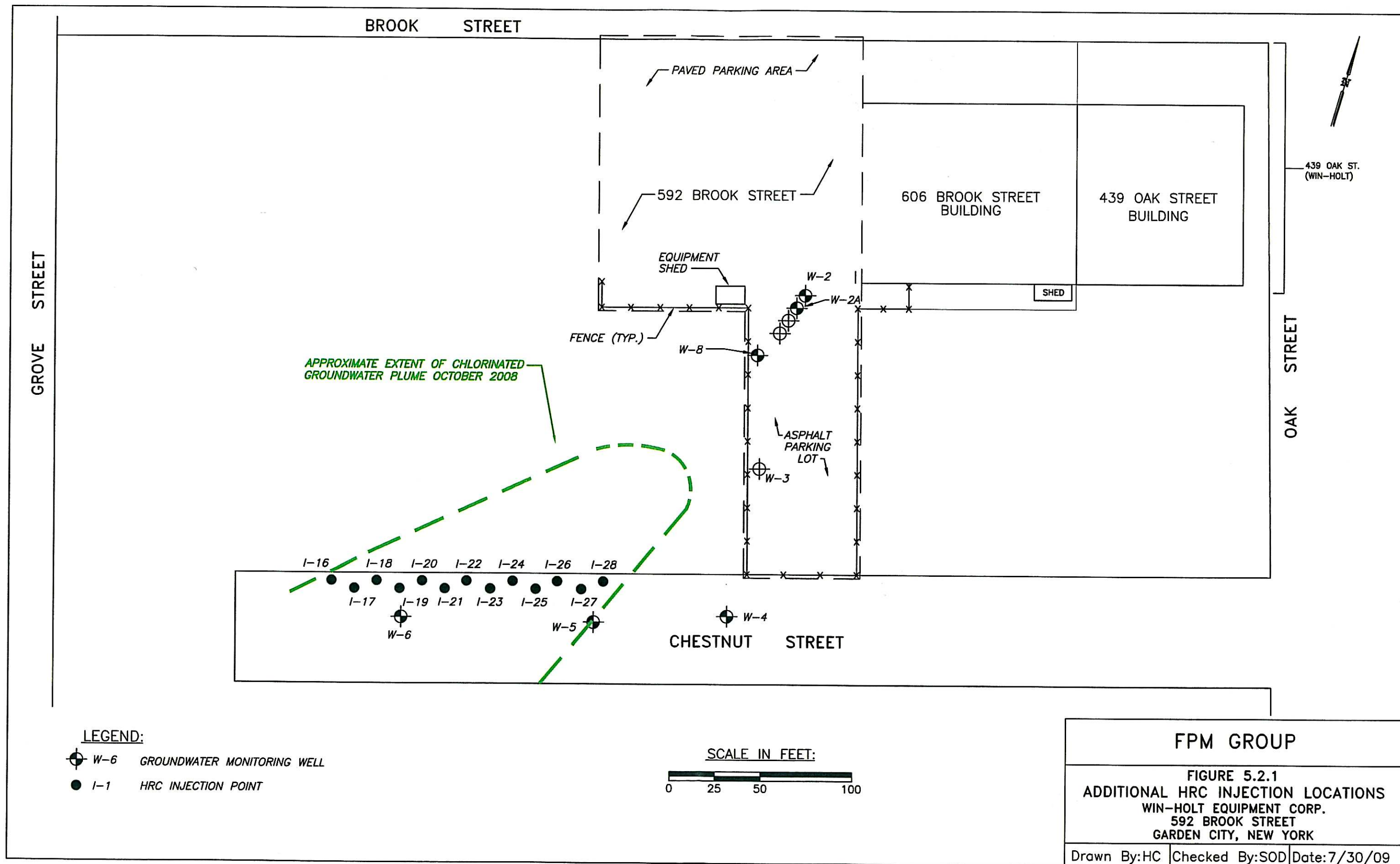
- **Delineate the extent of the soil gas plume downgradient of the Site.** Soil gas sampling was conducted downgradient of the Site in March 2006 and is documented in our February 7, 2007 report. Sub-slab soil vapor, indoor air and outdoor air sampling was performed in July 2008 at two downgradient residences, as documented in our March 4, 2009 report (resubmitted on July 27, 2009). The results indicate that there is a possibility of vapor intrusion for 1,1,1-TCA at one residence. Further monitoring will be conducted at the downgradient residences during the next heating season. This RAO will continue to be addressed during this program to the extent feasible given access constraints.

5.2 Additional Remedial Action

As discussed in Section 4, groundwater monitoring performed following the HRC injection event showed improvements in chlorinated VOC concentrations on the periphery of the offsite chlorinated VOC plume, but did not show an improvement in the concentrations in the centerline of the plume (well W-6, and, to a lesser extent, well W-5). An additional injection of HRC is proposed in the area and upgradient of wells W-5 and W-6 to remediate the chlorinated VOC plume. HRC will be injected at approximately 13 locations, I-16 through I-28, in the vicinity and upgradient of well W-5 and W-6, as shown on Figure 5.2.1. HRC will be injected from 4 to 14 feet below the water table surface (27 to 37 feet below grade) at each location using a direct-push rig.

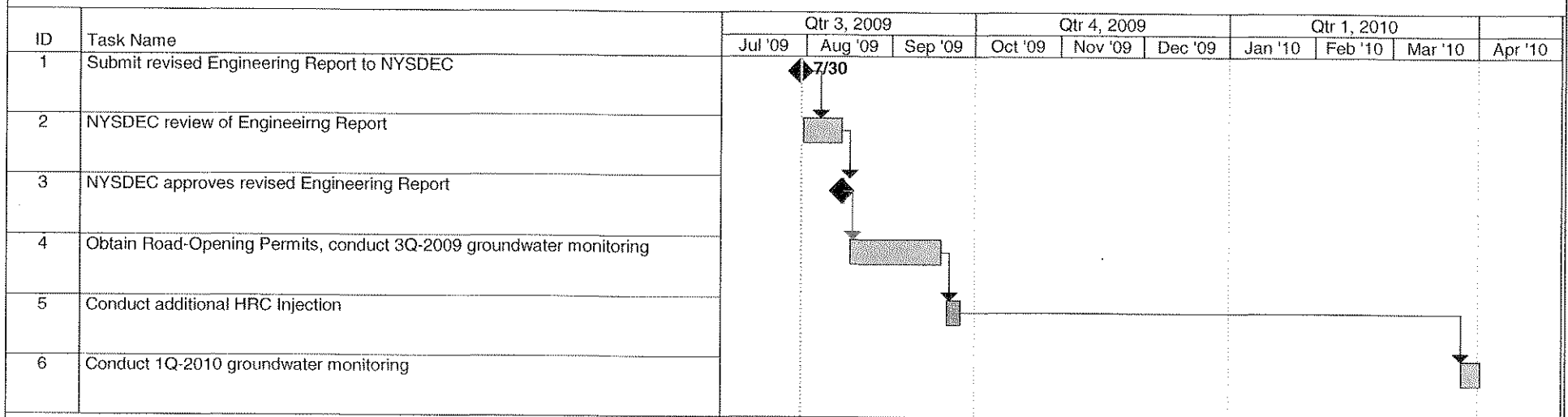
A groundwater monitoring event will be performed prior to the injection and again approximately six months following the injection. Groundwater monitoring procedures are described in Section 4.3 herein. Based on the total chlorinated VOC concentrations in the injection area (October 2008 data) and using standard assumptions concerning aquifer properties, it is estimated that approximately 1,500 pounds of HRC will be necessary to treat the chlorinated VOCs in the wells W-5 and W-6 area and downgradient vicinity. Calculations showing the HRC volume estimate for the area to be treated are included in Appendix E. The HRC will be injected during one injection event. The actual number of injection points, based on the pounds of HRC to be injected, will be determined in consultation with the injection contractor. The follow-up groundwater monitoring results will be reviewed to evaluate the effectiveness of this treatment.

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A schedule for implementation of the additional HRC injection is provided in Figure 5.2.2. This schedule takes into account the review and approval of this Engineering Report, road-opening permit requirements, and the groundwater monitoring schedule.

**FIGURE 5.2.2
SCHEDULE FOR ADDITIONAL HRC INJECTION
WIN-HOLT EQUIPMENT CORPORATION SITE
GARDEN CITY, NEW YORK**



Project: Figure 5.2.2 Date: Thu 7/30/09	Task		Milestone		External Tasks	
	Split		Summary		External Milestone	
	Progress		Project Summary		Deadline	

clients\winholt\enggrpt(July2009)Figure 522.mpp

SECTION 6.0 REFERENCES

FPM Group, June 2005. *Remedial Action Work Plan for Win-Holt Equipment Corporation Site, 592 Brook Street Garden City, New York*

FPM Group, October 2006. *Pilot Test Report for Win-Holt Equipment Corporation Site, 592 Brook Street Garden City, New York*

New York State Department of Environmental Conservation, May 10, 2002. *Voluntary Cleanup Agreement for 592 Brook Street, Garden City, Nassau County, New York, Site # V00243-1.*

New York State Department of Environmental Conservation, September 10, 2007, July 12, 2000 and November 12, 1997. *DAR-1.*

New York State Department of Environmental Conservation, March 8, 1998. *Water Quality Regulations for Surface Waters and Groundwaters.*

APPENDIX A

**AIR SPARGING AND SOIL VAPOR EXTRACTION
WELL INSTALLATION LOGS
AND
WELL SAMPLING FORMS**

FPM GROUP

Ronkonkoma, New York

SITE MAP

FPM PROJECT # WIN-HOLT FPM JOB # _____
 SITE ADDRESS 592 BROOK STREET, GARDEN CITY
 BORING/WELL AS-1 TOTAL DEPTH 43' DIAMETER _____
 TOC ELEV. _____ WATER LEVEL INITIAL ~24 STATIC _____
 SCREEN DIA. 2 in LENGTH 2 ft SLOT SIZE 0.02
 CASING DIA. 2 in LENGTH 40 ft TYPE Sch. 40
 DRILLING COMP. Associated DRILLING METHOD Hollow Stem Auger
 DRILLER BM LOG BY JTB DATE DRILLED 7/4/05

DEPTH (FEET)	SAMPLE	OVA/PID (ppm)	WELL CONSTRU- CTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2					
4					
6					
8					
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					

100% G

100% G

Well Gravel

Screened 40'-42'

FPM GROUP

Ronkonkoma, New York

SITE MAP

FPM PROJECT # WIN-HOLT FPM JOB # _____
 SITE ADDRESS 592 Brook Street
 BORING/WELL AS-2 TOTAL DEPTH 60' DIAMETER 10"
 TOC ELEV. _____ WATER LEVEL INITIAL ~24' STATIC _____
 SCREEN DIA. 2 inch LENGTH 2 ft SLOT SIZE 0.02
 CASING DIA. 2 inch LENGTH 56 TYPE Sch. 40
 DRILLING COMP. Associated DRILLING METHOD Hollow Stem Auger
 DRILLER BM LOG BY JR DATE DRILLED 4/5/06

DEPTH (FEET)	SAMPLE	OVA/PID (ppm)	WELL CONSTRU- CTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
10			AS-2		
20					
30					
40					
50			100%		
55			100%		
56			WELL GRAVEL		Screened 56'-58'
60					

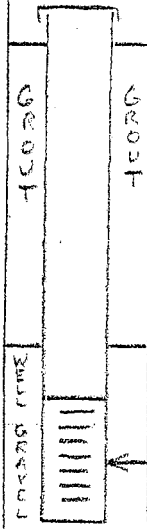
FPM GROUP

Ronkonkoma, New York

SITE MAP

FPM PROJECT # Win-Holt FPM JOB # _____
 SITE ADDRESS 592 Brook St. Garden City
 BORING/WELL SVE-1 TOTAL DEPTH 23 ft DIAMETER _____
 TOC ELEV. _____ WATER LEVEL INITIAL ~24 STATIC _____
 SCREEN DIA. 2 in LENGTH 5 ft SLOT SIZE 0.02
 CASING DIA. 2 in LENGTH 17 ft TYPE Sch. 40
 DRILLING COMP. Associated DRILLING METHOD Hollow Stem Auger
 DRILLER BM LOG BY JB DATE DRILLED 4/4/05

DEPTH (FEET)	SAMPLE	OVA/PID (ppm)	WELL CONSTRUC- TION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2					
4					
6					
8					
10					
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					



SP

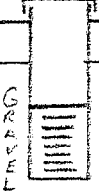
Screen installed 17'-22'

FPM GROUP

Ronkonkoma, New York

SITE MAP

FPM PROJECT # WIN-HOLT FPM JOB # _____
 SITE ADDRESS 592 BROOK ST, GARDEN CITY
 BORING/WELL SVE-2 TOTAL DEPTH 9' DIAMETER _____
 TOC ELEV. _____ WATER LEVEL INITIAL ~24ft STATIC _____
 SCREEN DIA. 2 IN LENGTH 3 FT SLOT SIZE 0.02
 CASING DIA. 2 IN LENGTH 5 FT TYPE _____
 DRILLING COMP. Associated DRILLING METHOD _____
 DRILLER BM LOG BY JB DATE DRILLED 4/5/06

DEPTH (FEET)	SAMPLE	OVA/PID (ppm)	WELL CONSTRU- CTION	GRAPHIC LOG	DESCRIPTION/SOIL CLASSIFICATION (INTERVAL, RECOVERY, COLOR, MATRIX TYPE, MOISTURE CONTENT, COMMENTS)
2					
4					
6					
8					
10					
12					
14					
16					
18					
20					
22					
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26					
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32					
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42					
44					
46					
48					
50					
52					

WELL SAMPLING DATA FORM

Project: Win-Holt 562-05-08Location: Garden CityWell No.: W-2 Well Diameter: 4"Date: 1/30/08 Start Time: _____Weather: clear, 40°F Finish Time: _____Sampled By: JB/JKBDepth to Bottom of Well: 32 Feet.Depth to Water: 18.83 Feet.Height of Water Column: 13.17 Feet.Water Volume in Casing: 8.56 Gallons.Water Volume to be Purged: 25.7 Gallons.Water Volume Actually Purged: 26 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.02	284	60.5	37.29
	16	5.93	287	60.5	0.00
	24	5.93	285	60.5	33.50

Sampling and Analytical Methods: Disposable Bailer / TCL VOCsLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win-Holt 562-05-08Location: Garden CityWell No.: W-2A Well Diameter: 4"Date: 1/30/08 Start Time: _____Weather: clear Finish Time: _____Sampled By: JTB/JKBDepth to Bottom of Well: 60 Feet.Depth to Water: 18.44 Feet.Height of Water Column: 4.56 Feet.Water Volume in Casing: 27 Gallons.Water Volume to be Purged: 81 Gallons.

Water Volume Actually Purged: _____ Gallons.

Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
1417	32 24	6.24	299	58.5 59.0	12.03
1426	60	6.19	300	60.1	0.00
1431	80	6.21	300	60.4	0.00

Sampling and Analytical Methods: Disposable Bailer / TCL VOCsLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win-Holt 562-05-08Location: Garden CityWell No.: W-3 Well Diameter: 4"Date: 1/30/08 Start Time: _____Weather: clear, 40°F Finish Time: _____Sampled By: JB / TKBDepth to Bottom of Well: 33 Feet.Depth to Water: 19.05 Feet.Height of Water Column: 13.95 Feet.Water Volume in Casing: 9.07 Gallons.Water Volume to be Purged: 27.2 Gallons.Water Volume Actually Purged: 27 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	10	6.41	293	58.7	0.00
	20	6.21	290	58.6	0.00
	27	6.37	291	58.5	0.00

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win-Holt 562-65-08Location: Garden CityWell No.: W-4 Well Diameter: 4"Date: 1/30/08 Start Time: _____

Weather: _____ Finish Time: _____

Sampled By: JB/TKBDepth to Bottom of Well: 33 Feet.Depth to Water: 20.67 Feet.Height of Water Column: 12.33 Feet.Water Volume in Casing: 8.01 Gallons.Water Volume to be Purged: 24 Gallons.

Water Volume Actually Purged: _____ Gallons.

Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.73	144	58.5	0.00
	16	6.31	147	61.0	0.00
	24	6.20	156	61.4	0.00

Sampling and Analytical Methods: Disposable BailerLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win-Holt 562-65-08Location: Garden CityWell No.: W-5 Well Diameter: 4 inDate: 1/30/09 Start Time: _____

Weather: _____ Finish Time: _____

Sampled By: JB/TKBDepth to Bottom of Well: 33 Feet.Depth to Water: 20.63 Feet.Height of Water Column: 12.37 Feet.Water Volume in Casing: 8.04 Gallons.Water Volume to be Purged: 24.1 Gallons.Water Volume Actually Purged: 24.5 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.20	387	57.9	0.00
	16	6.20	384	60.7	0.00
	24	6.29	380	59.8	0.00

Sampling and Analytical Methods: Disposable Bailer / TEL VOCsLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win-Holt 562-05-08Location: Garden CityWell No.: W-6 Well Diameter: 4'Date: 1/30/08 Start Time: _____Weather: P. Sunny 40°F Finish Time: _____Sampled By: JB/TKBDepth to Bottom of Well: 35 Feet.Depth to Water: 20.94 Feet.Height of Water Column: 14.06 Feet.Water Volume in Casing: 9.14 Gallons.Water Volume to be Purged: 27.4 Gallons.Water Volume Actually Purged: 28 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.06	94	59.3	0.00
	16	5.74	67	60.6	0.00
	24	5.59	78	60.1	0.00

Sampling and Analytical Methods: Disposable Bailer / TCL VOCsLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win-Holt 562-05-08Location: Garden CityWell No.: W-7 Well Diameter: 4"Date: 1/30/08 Start Time: _____Weather: drizzle, 40°F Finish Time: _____Sampled By: JB/JKBDepth to Bottom of Well: 46 Feet.Depth to Water: 19.77 Feet.Height of Water Column: 26.23 Feet.Water Volume in Casing: 17.05 Gallons.Water Volume to be Purged: 51.1 Gallons.Water Volume Actually Purged: 51 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	16	7.21	1	58.8	0.00
	32	6.82	1	59.1	0.00
	48	6.49	2	58.8	0.00

Sampling and Analytical Methods: Disposable Bailer / TCL VOCsLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win - Holt 562-05-08Location: Garden CityWell No.: W-8 Well Diameter: 4"Date: 1/30/08 Start Time: _____Weather: clear, 40°F Finish Time: _____Sampled By: JB/TKBDepth to Bottom of Well: 34 Feet.Depth to Water: 18.65 Feet. DUP.Height of Water Column: 15.65 Feet.Water Volume in Casing: 10.17 Gallons.Water Volume to be Purged: 30.5 Gallons.

Water Volume Actually Purged: _____ Gallons.

Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.11	301	58.9	0.00
	16	6.06	293	60.5	0.00
	28	6.08	288	60.5	0.00

Sampling and Analytical Methods: Disposable Bailer / TCL VOCsLaboratory Name and Location: Test America - CT

WELL SAMPLING DATA FORM

Project: Win-HoltLocation: Garden CityWell No.: W-2 Well Diameter: 4"Date: Oct. 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: JB / JKBDepth to Bottom of Well: 32 Feet.Depth to Water: 19.29 Feet.Height of Water Column: 12.71 Feet.Water Volume in Casing: 8.26 Gallons.Water Volume to be Purged: 24.8 Gallons.Water Volume Actually Purged: 25 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	<u>8.9</u>	<u>7.21</u>	<u>432</u>	<u>68.0</u>	<u>68.78</u>
	<u>16</u>	<u>6.65</u>	<u>443</u>	<u>66.5</u>	<u>17.39</u>
	<u>24</u>	<u>6.23</u>	<u>449</u>	<u>66.1</u>	<u>0.82</u>

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America CT

WELL SAMPLING DATA FORM

Project: Wip - HoltLocation: Garden CityWell No.: W-2A Well Diameter: 4"Date: Oct 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: JB/JKBDepth to Bottom of Well: 160 Feet.Depth to Water: 18.92 Feet.Height of Water Column: 4.08 Feet.Water Volume in Casing: 26.7 Gallons.Water Volume to be Purged: 80.1 Gallons.Water Volume Actually Purged: 81 Gallons.Purge Method: Submersible PumpPhysical Appearance/Comments: MS/MSD

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	30	6.26	349	63.4	25.71
	55	6.44	353	63.3	0.73
	80	6.52	355	62.7	1.12

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America CT

WELL SAMPLING DATA FORM

Project: Win-HoltLocation: Garden CityWell No.: W-3 Well Diameter: 4"Date: Oct 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: TJB/JKBDepth to Bottom of Well: 33 Feet.Depth to Water: 19.62 Feet.Height of Water Column: 13.38 Feet.Water Volume in Casing: 8.7 Gallons.Water Volume to be Purged: 26.1 Gallons.Water Volume Actually Purged: 26 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.73	373	66.6	10.51
	16	6.52	371	65.7	8.27
	26	6.45	371	65.5	0.00

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America CT

WELL SAMPLING DATA FORM

Project: Win - HoltLocation: Garden CityWell No.: W-4 Well Diameter: 4"Date: Oct. 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: TB / JKBDepth to Bottom of Well: 33 Feet.Depth to Water: 20.86 Feet.Height of Water Column: 12.14 Feet.Water Volume in Casing: ~~78~~ 7.89 Gallons.Water Volume to be Purged: 23.7 Gallons.Water Volume Actually Purged: 24 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.40	358	65.6	61.09
	16	6.31	336	64.9	6.56
	23	6.29	321	64.6	0.00

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America CT

WELL SAMPLING DATA FORM

Project: Win-HoltLocation: Garden CityWell No.: W-5 Well Diameter: 4"Date: Oct. 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: JB/JKBDepth to Bottom of Well: 33 Feet.Depth to Water: 21.13 Feet.Height of Water Column: 11.87 Feet.Water Volume in Casing: 7.72 Gallons.Water Volume to be Purged: 23.1 Gallons.Water Volume Actually Purged: 23.5 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.15	363	66.1	16.87
	16	6.20	357	65.5	4.01
	23	6.25	353	65.5	0.00

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America CT

WELL SAMPLING DATA FORM

Project: Win-HoltLocation: Garden CityWell No.: W-6 Well Diameter: 4"Date: Oct 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: JB/JKBDepth to Bottom of Well: 35 Feet.Depth to Water: 21.45 Feet.Height of Water Column: 13.55 Feet.Water Volume in Casing: 8.81 Gallons.Water Volume to be Purged: 26.4 Gallons.Water Volume Actually Purged: 26.5 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	8	6.22	146	67.0	5.38
	16	6.12	140	66.1	1.14
	26	6.11	133	65.8	0.79

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America CT

WELL SAMPLING DATA FORM

Project: Win - HoltLocation: Garden CityWell No.: W-7 Well Diameter: 4"Date: Oct. 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: JTB/JKBDepth to Bottom of Well: 46 Feet.Depth to Water: 20.35 Feet.Height of Water Column: 25.65 Feet.Water Volume in Casing: 16.7 Gallons.Water Volume to be Purged: 50 Gallons.Water Volume Actually Purged: 20 Gallons.Purge Method: Submersible Pumpok per Jeff Dyber due to
stabilization of GW quality
parameters

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	6	6.54	132	63.4	5.27
	8	6.45	130	62.2	3.19
	12	6.28	150	61.4	8.17
	14	6.22	155	60.0	9.77
	16	6.19	158	60.3	3.87

Sampling and Analytical Methods: _____

Laboratory Name and Location: _____

S:\Hydro Dept\Forms\wellsampform.wpd

18	6.18	160	60.5	4.99
20	6.19	150	60.5	5.01

FPM

Test America CT

Disposable
bailer/
TL VOCs

WELL SAMPLING DATA FORM

Project: Win-HoltLocation: Garden CityWell No.: W-8 Well Diameter: 4"Date: Oct 10, 2008 Start Time: _____Weather: clear, 70°F Finish Time: _____Sampled By: JB/TKBDepth to Bottom of Well: 34 Feet.Depth to Water: 17.45 Feet.Height of Water Column: 16.55 Feet.Water Volume in Casing: 10.76 Gallons.Water Volume to be Purged: 32.3 Gallons.Water Volume Actually Purged: 32.5 Gallons.Purge Method: Submersible Pump

Physical Appearance/Comments: _____

FIELD MEASUREMENTS:

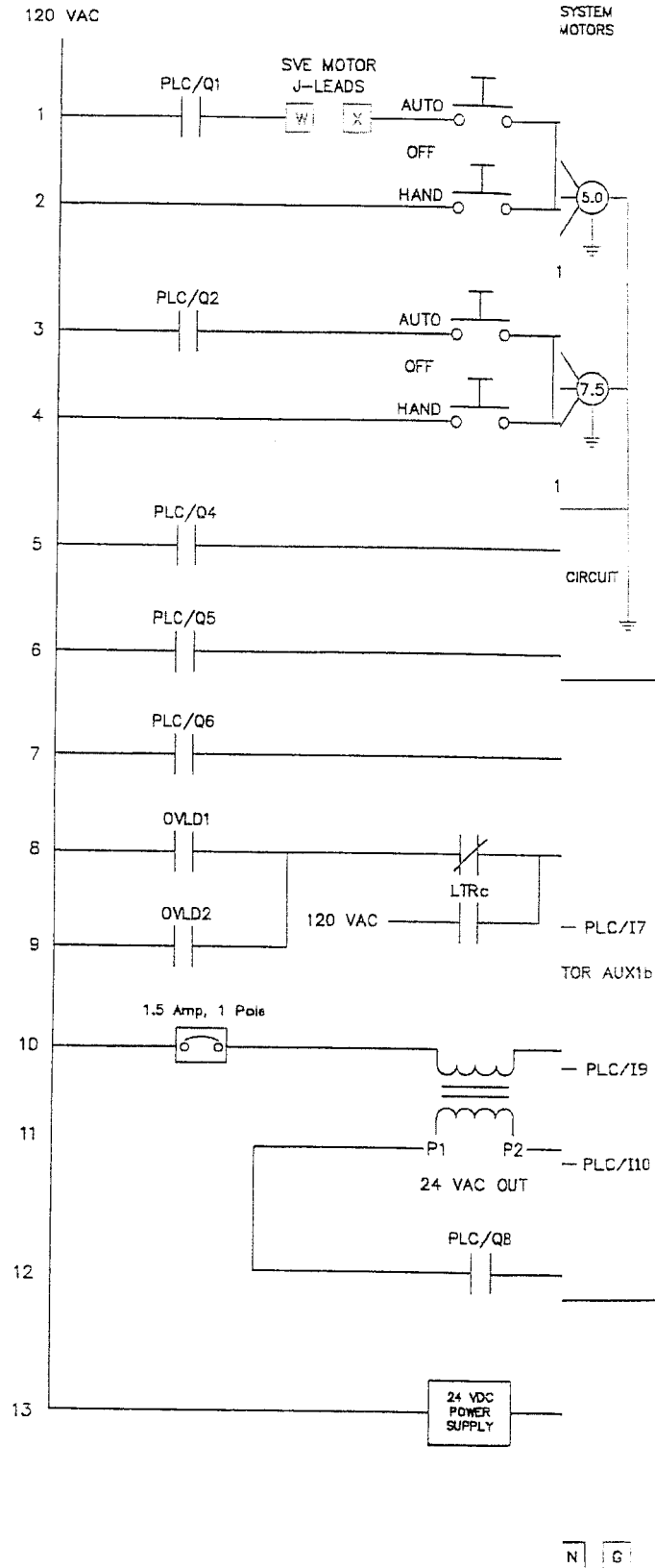
Time	Gallons	pH	Cond. (uS)	Temp. (°F)	Turbidity (NTU)
	10	6.73	413	62.9	4.06
	20	6.72	414	63.2	1.87
	32	7.18	412	63.0	0.34

Sampling and Analytical Methods: Disposable bailer / TCL VOCsLaboratory Name and Location: Test America CT

APPENDIX B

SYSTEM PROCESS INSTRUMENTATION DIAGRAMS

CONTROL CIRCUIT LADDE



DRAWING LEGEND

- NORMALLY OPEN SWITCH
- COIL OF MOTOR CONTACTOR "X"
- GREEN LIGHT
- RED LIGHT
- NORMALLY CLOSED CIRCUIT
- NORMALLY OPEN CIRCUIT
- OVL1 THERMAL OVERLOAD
- TERMINAL BLOCK

PLC/Qx PLC DISCRETE OUTPUT x

PLC/Ix PLC DISCRETE INPUT x

SVE BLOWER

AMETEK ROTRON EN757F72XL
5 hp, 3-PHASE, 208-230/460VAC, 60Hz

AIR-SPARGE COMPRESSOR

BECKER KDT3.60 (CUSTOM)
7.5 hp, 3-PHASE, 208-230/460VAC, 60Hz

DRAWN/REVISED BY: JW
REVISION DATE: JUNE 27, 2008

FIGURE:
E1

DRAWING TITLE

AS-BUILT AIR SPARGE/SVE
CONTROL PANEL SCHEMATIC
S/N #FPM-592BRKST-CP1

PROJECT NAME

WIN HOLT EQUIPMENT
592 BROOK STREET
GARDEN CITY, NEW YORK

PREPARED FOR

FPM GROUP
909 MARCONI AVENUE
RONKONKOMA, NY 11779

Enviroirac
ENVIRONMENTAL SERVICES
5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

AUTOMATIC TIMER
TO CONTROL
SOLENOID VALVES

TYPICAL FOR
AIR SPARGE WELL
TOTAL OF TWO

2"Ø SCH

SVE WELL
TYPICAL
OF TWO

NOTES:

BLOWER: ROTRON MODEL NO: EN757F72XL (5 HP, 3 PH, XI
COMPRESSOR: BECKER MODEL NO: KDT3.60 (7.5 HP, 3 PH,

SYSTEM LEGEND:

- ⊙ VACUUM GAUGE
- ⊕ TEMPERATURE GAUGE
- ⊗ PRESSURE GAUGE
- ⊗ SAMPLE PORT
- ⊗ BALL VALVE
- ⊗ VENTURI FLOWMETER
- ⊗ ROTAMETER FLOWMETER
- ⊗ VACUUM RELIEF VALVE
- ⊗ CHECK VALVE
- ⊗ SOLENOID VALVE
- ⊗ LEVEL SWITCH
- ⊗ TEMPERATURE SWITCH
- ⊗ VACUUM SWITCH
- ⊗ UNION
- ELECTRIC LINE
- ← AIR FLOW DIRECTION
- ENCLOSURE LIMITS

DRAWN/REVISED BY: JW
REVISION DATE: JUNE 27, 2008

FIGURE:
1

DRAWING TITLE

AS-BUILT AIR SPARGE/SOIL VAPOR
EXTRACTION SYSTEM PROCESS AND
INSTRUMENTATION DIAGRAM

PROJECT NAME

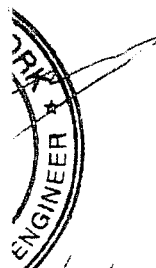
WIN HOLT EQUIPMENT
592 BROOK STREET
GARDEN CITY, NEW YORK

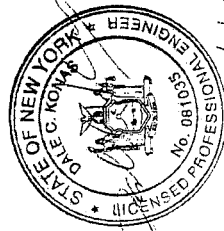
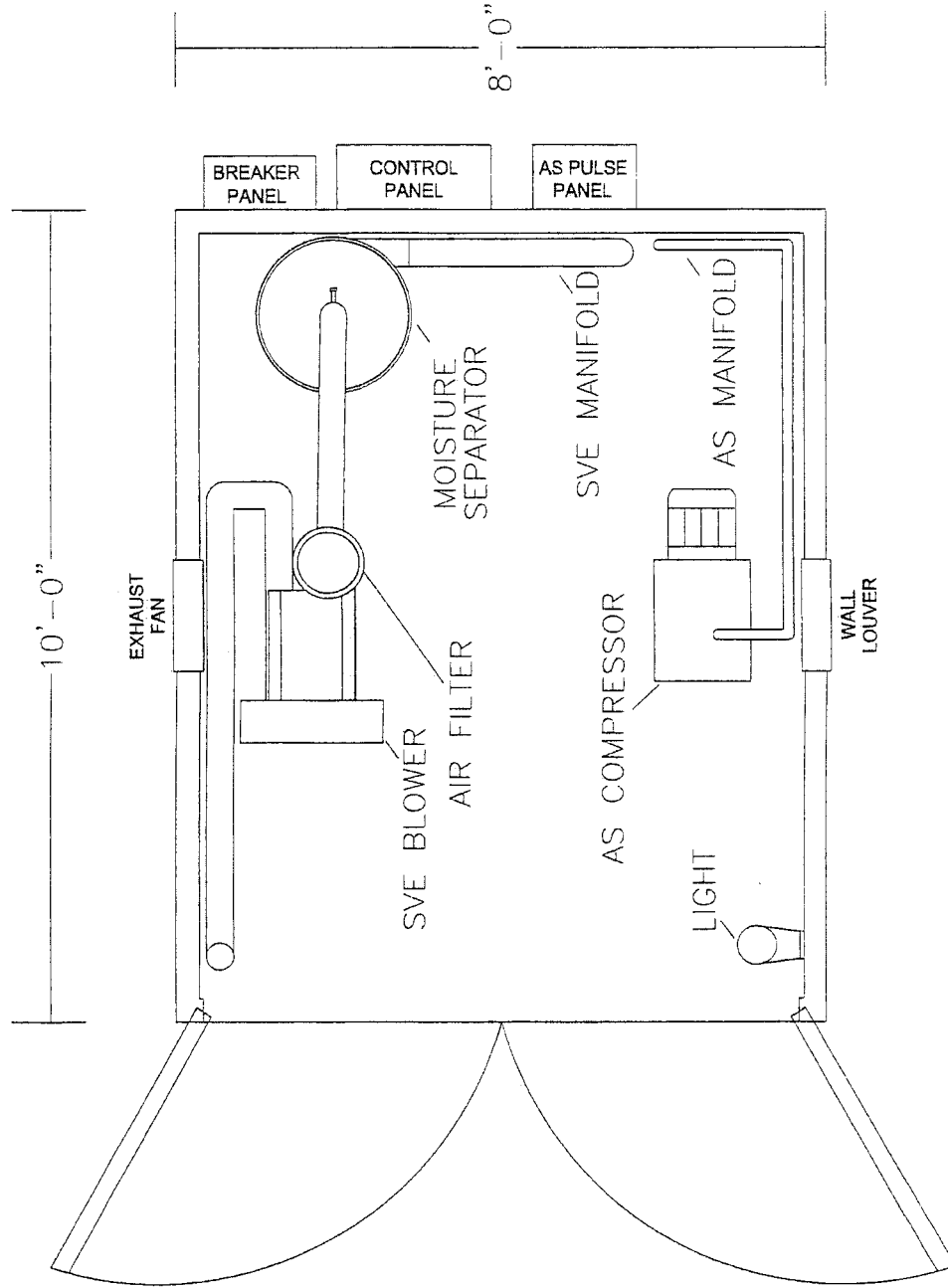
PREPARED FOR

FPM GROUP
909 MARCONI AVENUE
RONKONKOMA, NY 11779

EnviroTrac
ENVIRONMENTAL SERVICES

5 OLD DOCK ROAD, YAPHANK, NEW YORK 11980
PHONE: (631)924-3001 FAX: (631)924-5001

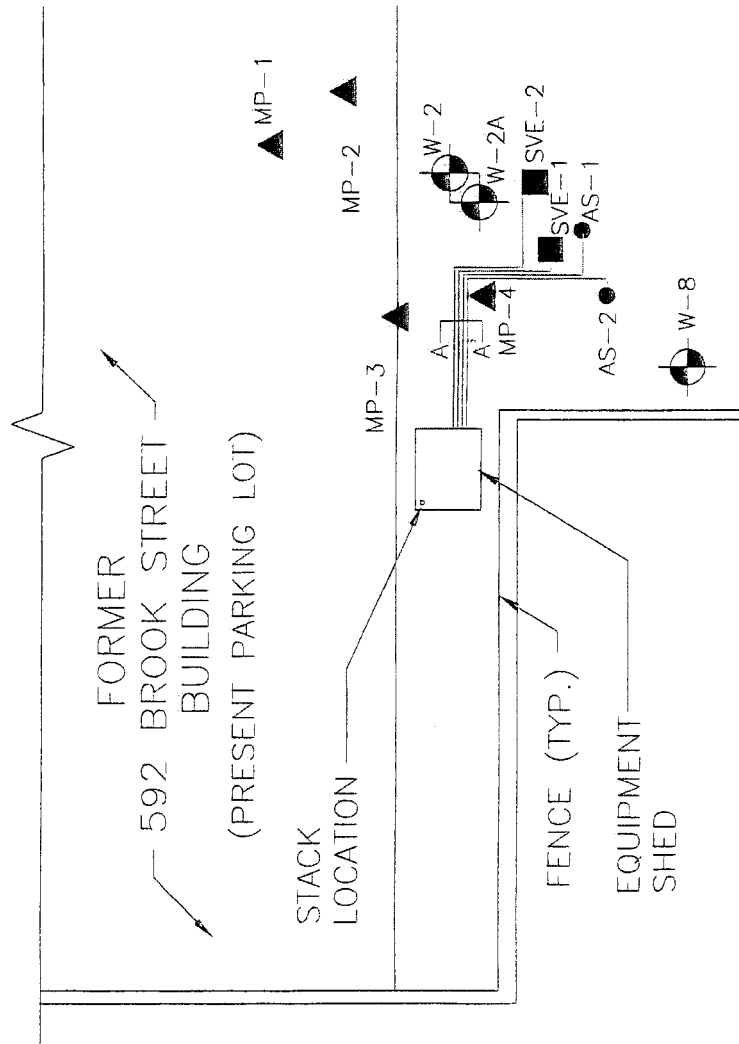




7/21/08

DRAWN/REVISED BY: JW	FIGURE:
REVISION DATE: JULY 21, 2008	2
DRAWING TITLE	AS-BUILT AS/SVE SYSTEM ENCLOSURE LAYOUT
PROJECT NAME	WIN-HOLT EQUIPMENT CORP. 592 BROOK STREET GARDEN CITY, NEW YORK
EnviroTrac 5 OLD DUCK ROAD, YAPHANK, NEW YORK 11980 PHONE: (631) 924-3001 FAX: (631) 924-5001	

SYSTEM LAYOUT



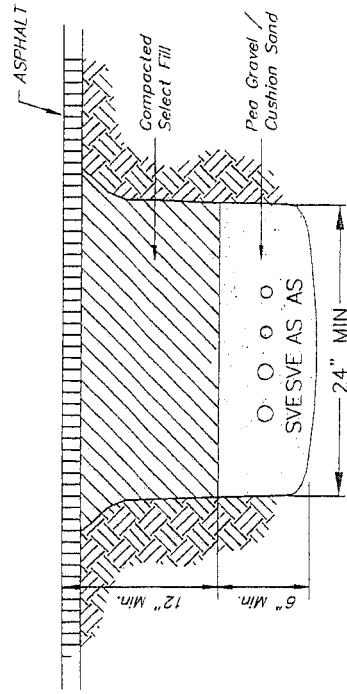
LEGEND:

- W-3 EXISTING GROUNDWATER MONITORING WELL
- SVE-1 SOIL VAPOR EXTRACTION WELL
- AS-1 AIR SPARGE WELL
- MP-1 SOIL VAPOR MONITORING POINT

APPROXIMATE SCALE IN FEET:



TRENCH CROSS-SECTION



SECTION A-A'

LEGEND:

- O = 2"Ø SCH 80 PVC SVE PIPING
- SVE
- O = 1 1/2"Ø SCH 80 CPVC AS PIPING
- AS

DRAWN/REVISED BY: JW
REVISION DATE: JULY 21, 2008
FIGURE: **3**

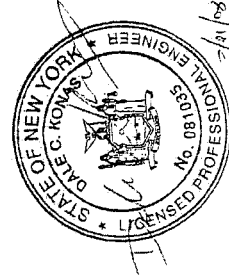
DRAWING TITLE

AS-BUILT AS/SVE
SYSTEM PIPING LAYOUT

PROJECT NAME

WIN-HOLT EQUIPMENT CORP.
882 BROOK STREET
GARDEN CITY, NEW YORK

EnviroTrac
ENVIRONMENTAL SERVICES
5 OLD POST ROAD, WEHAWEC, NEW YORK 11980
PHONE: (631)924-3601 FAX: (631)924-3601



APPENDIX C

EQUIPMENT SPECIFICATIONS

KDT Series

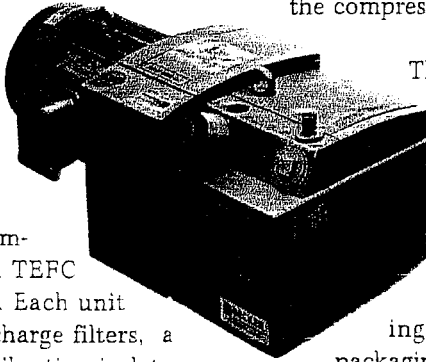
ISO 9001 Certified
CE Compliant

100% OIL-LESS COMPRESSORS

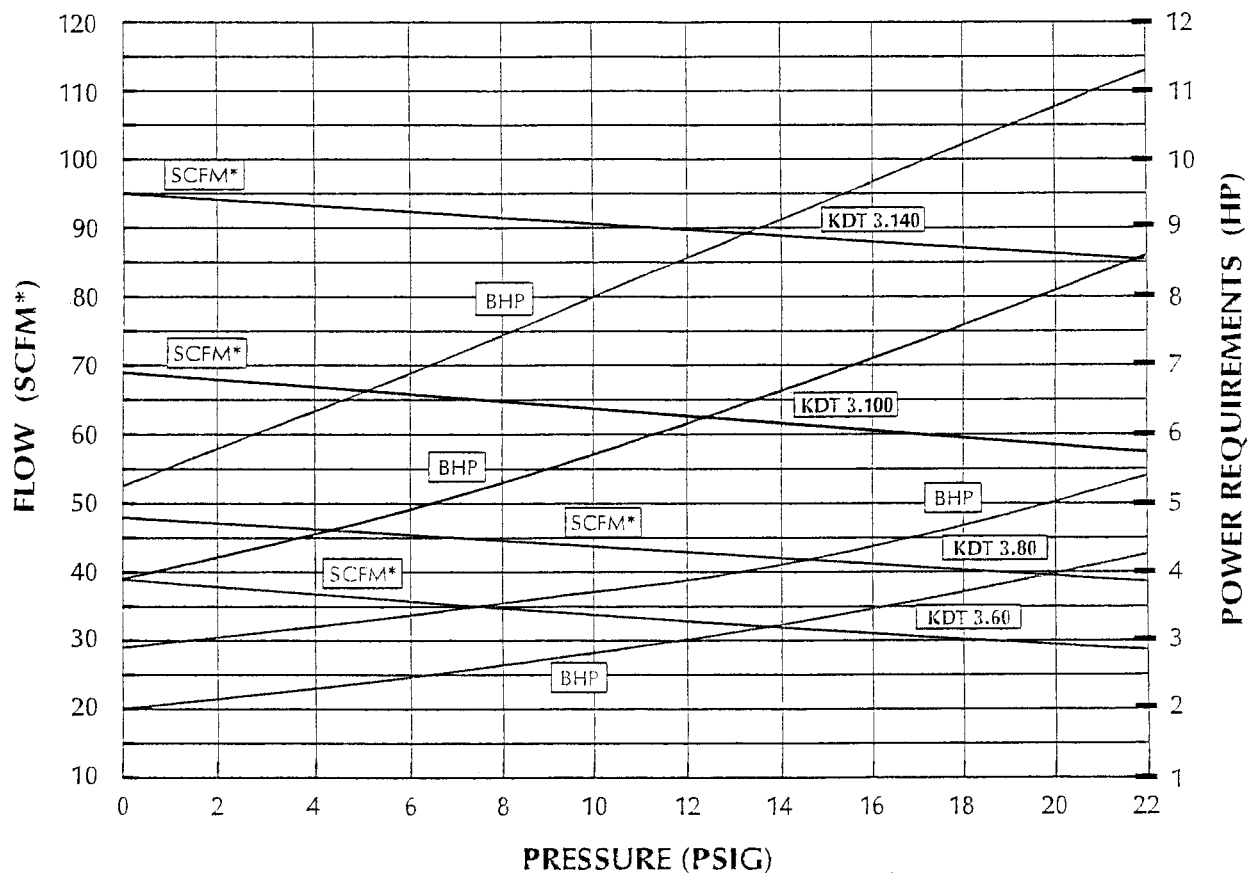
The Becker KDT series is a line of 100% Oil-less, rotary vane, low pressure compressors. They are designed to operate on a continuous basis throughout a pressure range from atmospheric pressure to 22 PSIG.

Each KDT unit is a direct drive compressor and is supplied with a TEFC flange mounted electric motor. Each unit is equipped with inlet and discharge filters, a pressure regulating valve, and vibration isolators as

standard equipment, all of which are an integral part of the compressor.



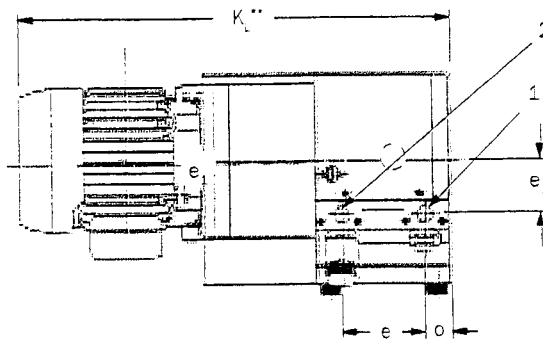
The Becker KDT compressor is ideal for applications where air is the gas and where operation is in the low pressure range where high pressure compressors are less efficient. Applications for the KDT compressor include graphic arts, soil remediation, pneumatic conveying, robotics and material handling, packaging, and paper converting.



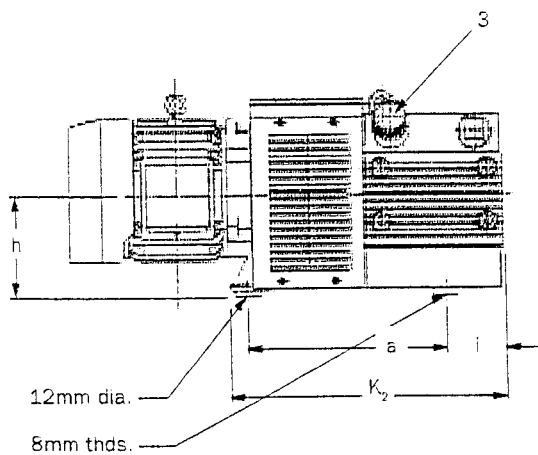
* @ 29.92" Hg Bar. Pr.: 68°F; 36% R.H.; 0.0754/ft³

Becker Pumps Corp. • 100 East Ascot Lane • Cuyahoga Falls, Ohio 44223-3768

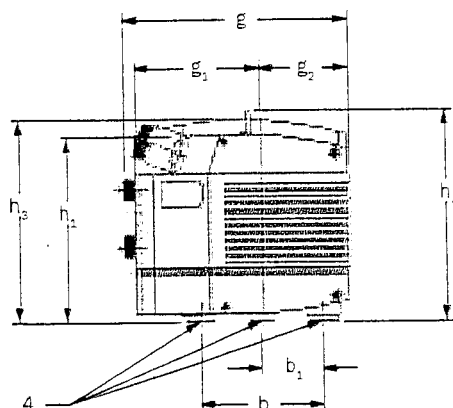
Ph. (330) 928-9966 • (888) 633-1083 • FAX: (330) 928-7065 • info@beckerpumps.com • www.beckerpumps.com



Top View



Side View



End View (Opposite Motor End)

All data based on 60 Hz operation

	KDT 3.60	KDT 3.80	KDT 3.100	KDT 3.140
Flow (SCFM @ 0 PSIG)	39	48	69	95
Horsepower	5*	7 ¹ / ₂ *	10*	12*
Speed (RPM)	1740	1740	1740	1740
Maximum Pressure (PSIG)	22	22	22	22
Weight (lbs.)—w/o motor	104	108	156	172
Weight (lbs.)—w/ motor**	191*	265*	323*	368*
Noise Level (Max. dBA)	74	76	78	84
Outlet size (BSP, inches)	1	1	1 ¹ / ₂	1 ¹ / ₂
Dimensional Data	(Inches)			
a	12.83	12.83	15.67	15.67
b	7.5	7.5	9.65	9.65
b ₁	3.75	3.75	4.82	4.82
e	5.43	5.43	7.5	7.5
e ₁	2.56	2.56	3.75	3.75
g	13.9	13.9	18.5	18.5
g ₁	7.68	7.68	8.78	8.78
g ₂	5.55	5.55	9.06	9.06
h	6.38	6.38	6.38	6.38
h ₁	11.38	11.38	11.7	11.7
h ₃	12.28	12.28	13.0	13.0
h ₄	12.9	12.9	13.25	13.25
i	3.78	3.78	5.5	5.5
k ₂	17.64	17.64	22.17	22.17
k _L	28.2	30	34.15	36.6
O	1.81	1.81	2.36	2.36

Manufacturer reserves right to alter data without notice.

* Operation at lower pressure may use smaller motor.

** May vary with motor type and manufacturer

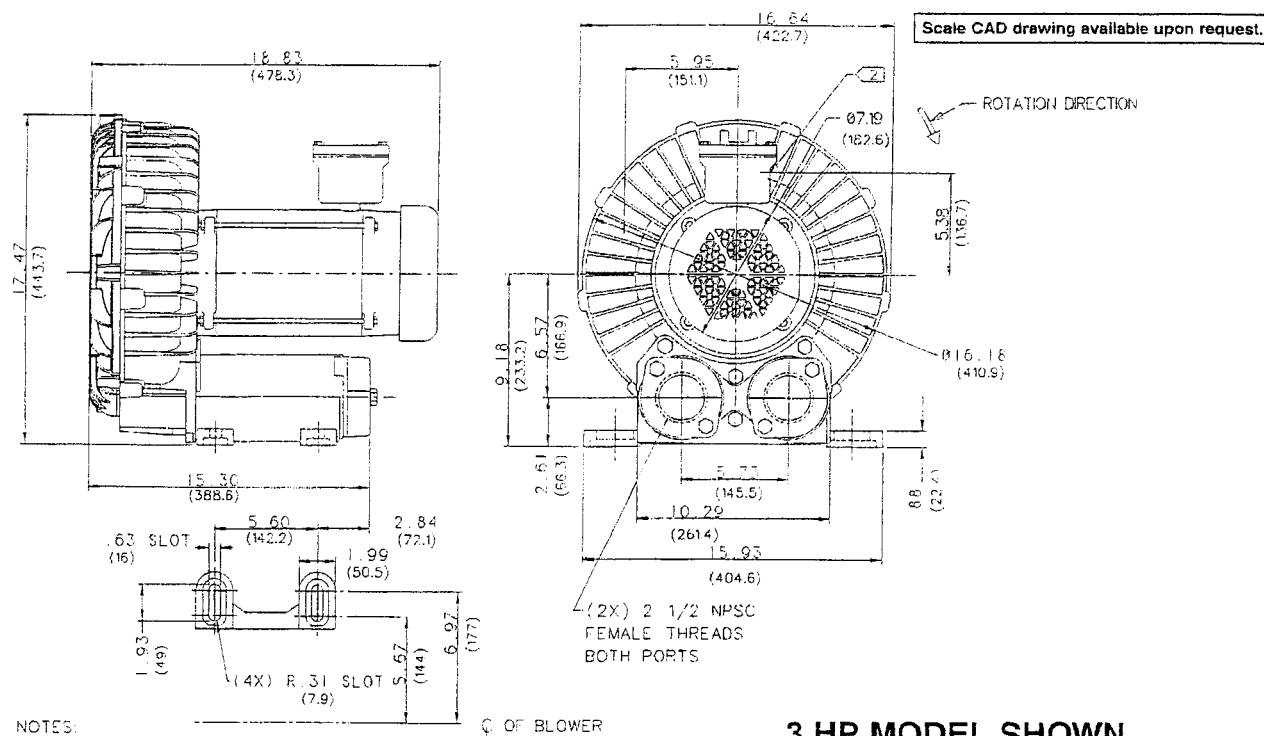
- 1 - Inlet Port
- 2 - Discharge Port
- 3 - Pressure Relief Valve
- 4 - Vibration Isolators

3LTD006 • 2/00

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Ph. (330) 928-9966 • (888) 633-1083 • FAX: (330) 928-7065 • info@beckerpumps.com • www.beckerpumps.com

EN 757 & CP 757 Regenerative Blower



3 HP MODEL SHOWN

SPECIFICATIONS

MODEL	EN757M72XL	EN757M86XL	EN757F72XL	CP757FW72XLR	CP757FU72XLR
Part No.	081176	081177	081174	081180	081181
Motor Enclosure – Shaft Material	XP – CS	XP – CS	XP – CS	Chem XP – SS	Chem XP – SS
Horsepower	3.0	3.0	5.0		
Voltage ¹	208-230/460	575	208-230/460		
Phase – Frequency ¹	Three - 60 Hz	Three - 60 Hz	Single - 60 Hz		
Insulation Class ²	B	B	B		
NEMA Rated Motor Amps	7.4/3.7	3.0	14/7		
Service Factor	1.0	1.0	1.0		
Locked Rotor Amps	54/47	22	152/76		
Max. Blower Amps ³	10/5	4.0	13/6.5		
Recommended NEMA Starter Size	0 / 0	0	1/1		
Shipping Weight	154 lb (70 kg)	154 lb (70 kg)	154 lb (70 kg)	inside front cover	inside front cover

¹ Rotron motors are designed to handle a broad range of world voltages and power supply variations. Our dual voltage 3 phase motors are factory tested and certified to operate on both: **208-230/415-460 VAC-3 ph-60 Hz** and **190-208/380-415 VAC-3 ph-50 Hz**. Our dual voltage 1 phase motors are factory tested and certified to operate on both: **104-115/208-230 VAC-1 ph-60 Hz** and **100-110/200-220 VAC-1 ph-50 Hz**. All voltages above can handle a $\pm 10\%$ voltage fluctuation. Special wound motors can be ordered for voltages outside our certified range.

² Maximum operating temperature: Motor winding temperature (winding rise plus ambient) should not exceed 140°C for Class F rated motors or 120°C for Class B rated motors. Blower outlet air temperature should not exceed 140°C (air temperature rise plus inlet temperature). Performance curve maximum pressure and suction points are based on a 40°C inlet and ambient temperature. Consult factory for inlet or ambient temperatures above 40°C.

³ Maximum blower amps corresponds to the performance point at which the motor or blower temperature rise with a 40°C inlet and/or ambient temperature reaches the maximum operating temperature.

Specifications subject to change without notice. Please consult your Local Field Sales Engineer for specification updates.

Rev. 2/04

Filtration Accessories

Blower Connection Key

NPT – American National Standard Taper Pipe Thread (Male)

NPSC – American National Standard Straight Pipe Thread for Coupling (Female)

SO – Slip On (Smooth – No Threads)

Moisture Separator™

By separating and containing entrained liquids, Rotron's moisture separator helps protect our regenerative blowers and the end treatment system from corrosion and mineralization damage. Recommended for all soil vacuum extraction applications.

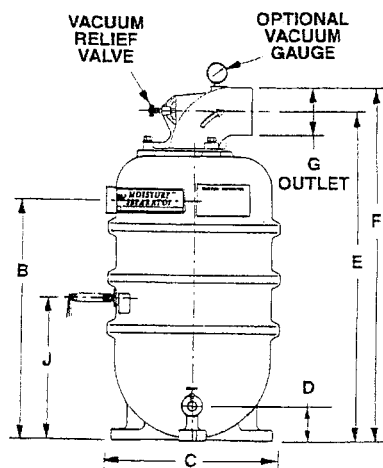
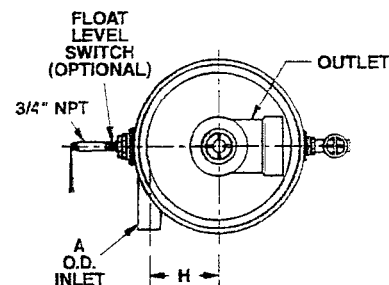
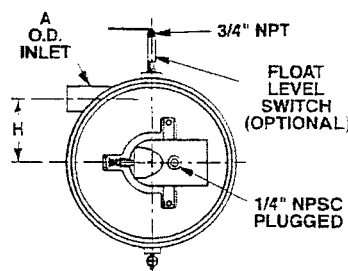
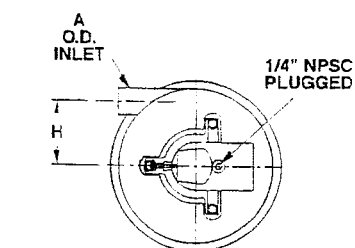
SPECIFICATIONS:

SEPARATION METHOD – High Efficiency Cyclonic

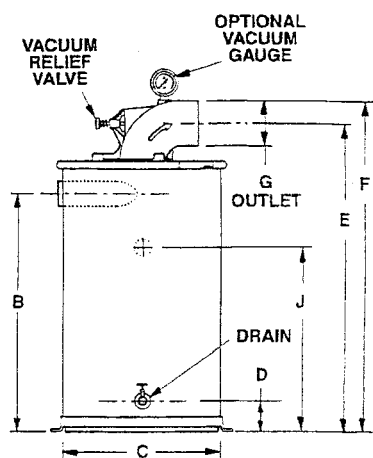
RELIEF VALVE MATERIAL – Brass & Stainless Steel

FLOAT MATERIAL – Copper

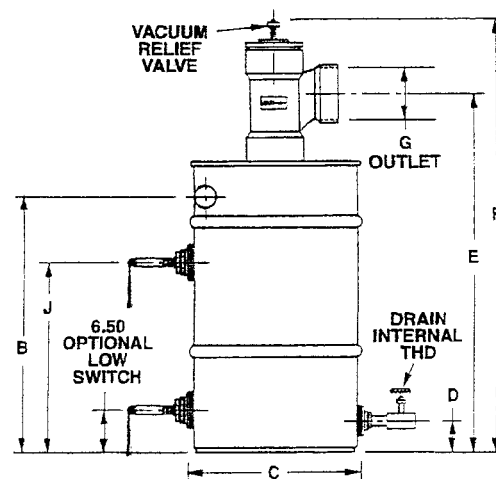
FLOAT SWITCH – SPDT, Explosion-proof
NEMA 7&9, 5 Amp max.



PLASTIC "P" DESIGN



METAL "D" DESIGN



METAL "B" DESIGN

Model	Part No.	CFM Max.	A Dia.	B	C Dia.	D	E	F	G Dia.	H	J Switch	Drain Internal THD	Shipping Weight				
MS200PS	038519	200	2.38	22.46	16.00	3.25	31.05	33.30	4.50 OD	6.00	13.25	3/4" NPT	42 lb.				
MS300PS	038520	300	2.88		22.12	16.75	2.75	27.92		30.17	6.56			12.62			
MS200DS	080086	200	2.00	6.81													
MS300DS	080087	300	2.50	3.25							28.00			23.00	4.00	37.25	39.50
MS350BS	038357	350	37.37		54.50	9.25											
MS500BS	080660	500	4.00		27.00	47.32	51.70	8.62 OD	10.00	19.88							
MS600BS	080659	600	6.00		31.00	27.00											
MS1000BS	038914	1000	6.00	31.00	27.00								150 lb.				

Models without float switch available. Metal MS200/300DS models are not the standard stocked, but are available.

Rev. 2/04

Blower Model Reference Key	
A = SPIRAL	E = DR/EN/CP 656, 6, 623, S7
B = DR/EN/CP 068, 083, 101, 202	F = DR/EN/CP 707, 808, 858, S9, P9 (Inlet Only)
C = DR/EN/CP 303, 312, 313, 353	G = DR/EN/CP 823, S13, P13 (Inlet Only)
D = DR/EN/CP 404, 454, 513, 505, 555, 523	H = DR/EN/CP 909, 979, 1223, 14, S15, P15 (Inlet Only)

2.0 Moisture Separator™ Specifications

2.1 DUTY

The moisture separator shall be designed for use in a soil vapor extraction system capable of continuous operation with a pressure drop of less than six inches of water at the rated flow of _____ SCFM. The separator shall be capable of operation under various inlet conditions ranging from a fine mist to slugs of water with high efficiency.

2.2 PRINCIPLE OF OPERATION

The moisture separator shall incorporate cyclonic separation to remove entrained water. The separator must protect against an overflow by fail safe mechanical means. An electrical switch or contact(s) alone is not an acceptable means of protection against overflow, but is a good backup.

2.3 CONSTRUCTION

The body of the moisture separator shall be constructed of heavy wall plastic or heavy gauge cold rolled steel. The steel interior and exterior shall be epoxy (powder) coated to resist abrasion, corrosion, and chipping that might expose the surface. The inlet shall be tangentially located and welded to the body. The outlet port shall be constructed of PVC or cast aluminum alloy, flanged and sealed to the center of the top of the separator. The separator shall incorporate a non-sparking copper

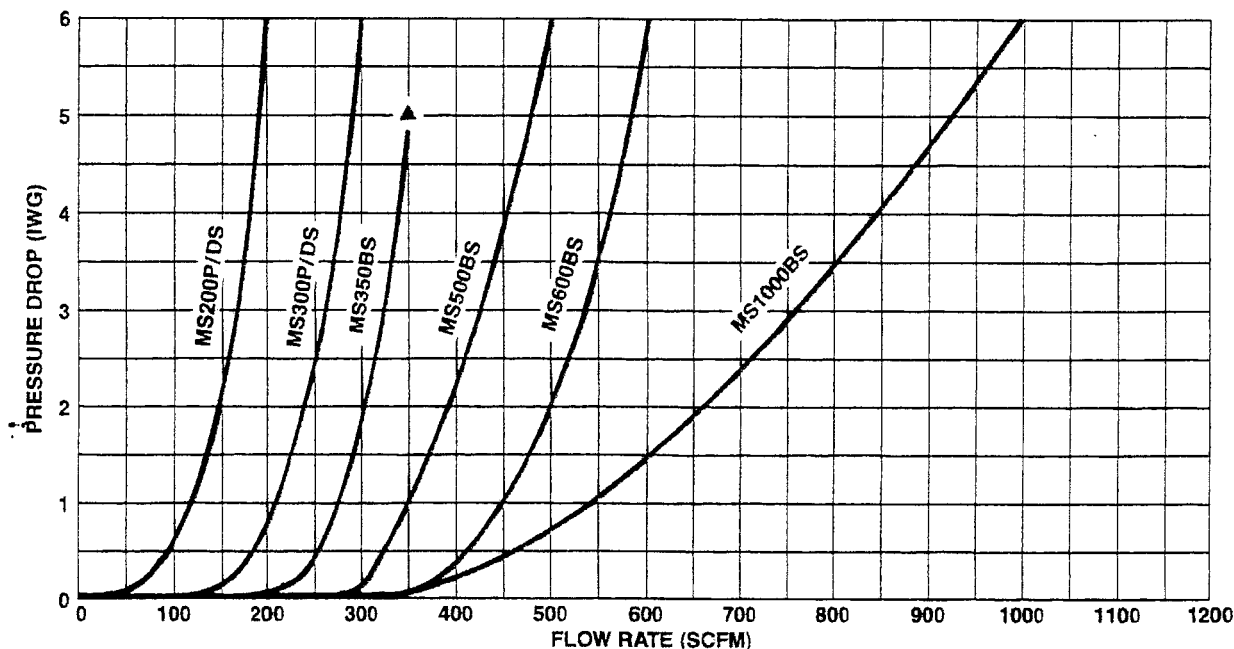
float ball and an adjustable relief valve to protect against overflow and overheating the blower.

2.4 CAPACITY AND DIMENSIONS

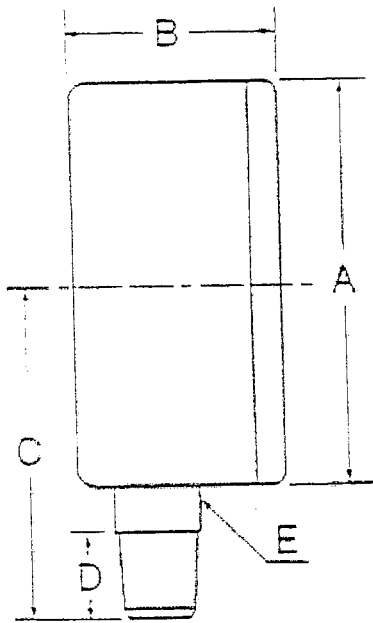
The moisture separator must have a liquid capacity of _____ gallons. The inlet shall be _____ inch OD slip-on type. The outlet shall be _____ inch OD slip-on type.

For DR/EN/CP Blower Model	Selector Moisture Separator Model	Liquid- holding Capacity (gallons)	Inlet (OD)	Outlet	Max Vacuum Allowed (IHg)
404 454 505 513 523 555 623 823	MS200PS	7	2.38	4.5" OD	12
	MS200DS	10	2.0		22
656 6 707	MS300PS	7	2.88		12
	MS300DS	10	2.5		22
808	MS350BS	40		6.63" ID	
858 1223	MS500BS		3.25		
909	MS600BS		4.0"		
979 14	MS1000BS		65		6.0"

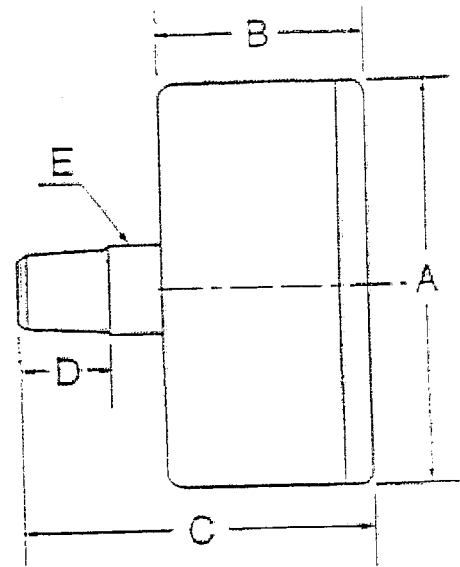
2.5 PRESSURE DROP



200 Series Pressure Gauges Diagrams



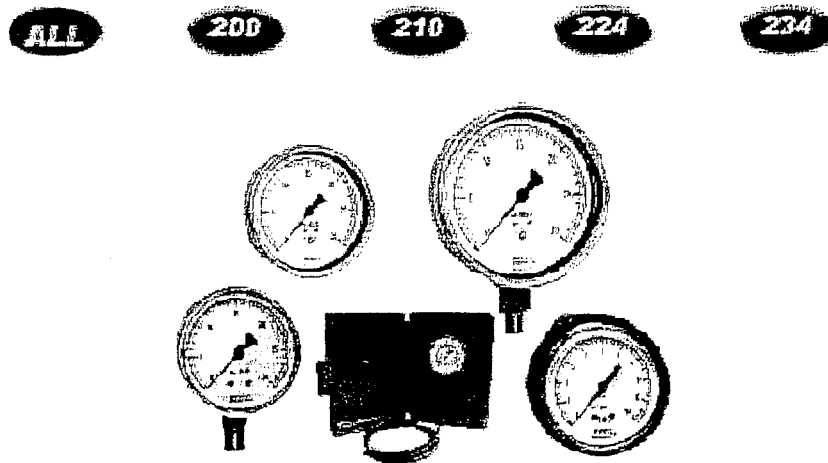
25.200, 40.200



25.210

Model		A	B	C	D	E	F	G	H
25.200	IN	2.48	1.58	2.09	0.55	0.55	---	---	---
	MM	63	40	53	14	14	---	---	---
25.210	IN	2.48	1.58	2.17	0.55	0.55	3.35	2.96	0.14
	MM	63	40	55	14	14	85	75	3.6
25.2EX	IN	7.50	2.06	5.75	2.11	---	---	---	---
	MM	190.5	52.3	146.1	53.5	---	---	---	---
40.200	IN	3.98	1.94	3.43	0.55	0.87	---	---	---
	MM	101	49.5	87	14	22	---	---	---

In keeping with and for purposes of product and/or manufacturing process improvements, **NOSHOK** reserves the right to make design changes without prior notice.

Select A 200 Series Model NumberGENERAL INFORMATION

NOSHOK 200 Series Diaphragm Gauges are designed for extremely low pressure or vacuum measurement. The ultra sensitive diaphragm capsules are rated for pressure (or vacuum) as low as 0-10 **inches of water** and as high as 0-10 **psi**.

The cases are constructed of black painted steel on the 2 1/2" size and 304 Stainless Steel on the 4" size. The lenses are molded plexiglass on the 2 1/2" size and instrument glass on the 4" size for strength and clarity. The diaphragm capsules are phosphor bronze and when coupled to the precision all-brass movements, provide extremely accurate indication over the service life of the gauge.

Available options include a recalibrator on the 2 1/2" size (accessible through the front of the dial) and overpressure protection of up to 200% of the dial range. Mounting options include 304 stainless steel or black steel triangular bezels and U-Clamps in addition to chrome or black steel front flanges.

Applications for **NOSHOK 200 Series Gauges** include medical, biomedical, heating-ventilating and air conditioning, gas distribution, filtration, burner and gas combustion service, waste water treatment and everywhere low pressure and vacuum measurement is required.

NOSHOK Selection, Installation & Maintenance Guide

Pressure Gauge Series 100, 200, 300, 400, 500, 600, 700, 800 and 900

Installation

Prior to pressure gauge installation, the following conditions should be considered: temperature, humidity, vibration, pulsation, shock, and other climatic and environmental conditions of the application, as well as the potential need for protective accessories and/or special installation requirements.

Always use a wrench on the gauge socket when installing a NOSHOK pressure gauge into position; never use force on the gauge case to tighten into position. This may result in a loss of accuracy, excessive friction and/or mechanical damage to the measuring element and case of the NOSHOK pressure gauge. When surface or panel mounting a gauge, be sure the surface is flat and the panel cutout and/or the mounting hole configuration is correct (please refer to the NOSHOK Pressure Gauge catalog NK95G for these specifications). If the surface is uneven or the panel cutout is larger than the gauges diameter, use an adapter ring to remove mounting strain and/or adapt the gauge to the larger diameter panel cutout. When connecting a gauge to a rigid pipe service, use flexible tubing where possible as a connector to eliminate plumbing strain. Rapid pressure pulsation and extreme mechanical vibration may be damaging to some NOSHOK pressure gauge movement gearing, bushings, and linkage. In extreme cases, steps should be taken to dampen these forces. In pressure ranges over 600 psi, a NOSHOK orifice is recommended for pulsation dampening, but in extreme pulsation applications a NOSHOK Piston Type Pressure Snubber may be required.

When installing a gauge into a corrosive situation be sure to select a pressure gauge or pressure gauge and diaphragm seal combination suitable for your application. Gauges to be used on high temperature service should have a five foot or longer leg of pipe or tubing connecting the gauge to dissipate heat and protect the gauge measuring element from damage.

A gauge to be used on steam pressure service should be installed with a water filled NOSHOK pigtail steam syphon between the gauge and the steam line.

Maintenance

Apart from occasional calibration, NOSHOK pressure gauges require little or no maintenance. Some applications may be more aggressive than others, resulting in an increased frequency in the need for calibration. The environmental limitations for the specific NOSHOK pressure gauge series should be observed in all cases, and gauges applied in situations outside these requirements may result in premature wear and/or failure of the gauge.

Warranty

All NOSHOK pressure gauges carry a one or three year warranty. NOSHOK warrants for three years our 300, 500, 600, 700 and 900 series liquid filled pressure gauges to be free from defects in materials and workmanship, to remain within the cataloged accuracy and performance specifications, and to maintain the integrity of the hermetically sealed case preventing leakage. NOSHOK warrants for one year our 100, 200, 400, 600, 700, and 800 series non-liquid filled pressure gauge. Certain limitations do apply; for more information please consult page three of the NOSHOK Pressure Gauges catalog (NK95G).

Please do not hesitate to contact us with any additional questions.



1010 WEST BAGLEY ROAD
BEREA, OHIO 44017
440/243-0888 FAX 440/243-
3472
E-MAIL: noshok@noshok.com

WEBSITE: www.noshok.com

Operating conditions including, but not limited to, system pressure, media compatibility and ambient conditions must be considered when selecting gauges and accessories. Improper selections and use of gauges could possibly cause gauge failure and lead to possible property damage or person injury. Refer to American National Standard ASME B40 for the correct selection and use of gauges. A copy of this standard may be obtained from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.

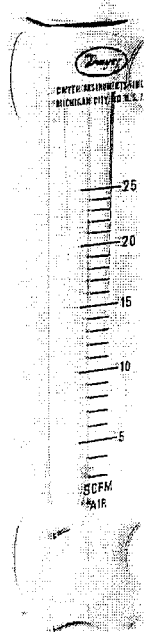
Glycerine or silicone could result in a spontaneous chemical reaction or explosion when combined with strong oxidizing agents including (but not limited to) chlorine, hydrochloric or nitric acid and hydrogen peroxide. Do not use glycerine or silicone filled gauges or accessories in these types of service. Consult factory for application assistance.

In keeping with and for the purposes of product and/or manufacturing improvements, NOSHOK reserves the right to make design changes without prior notice.



VFC Series Visi-Float® Flowmeter

Specifications - Installation and Operating Instructions



Back Connections

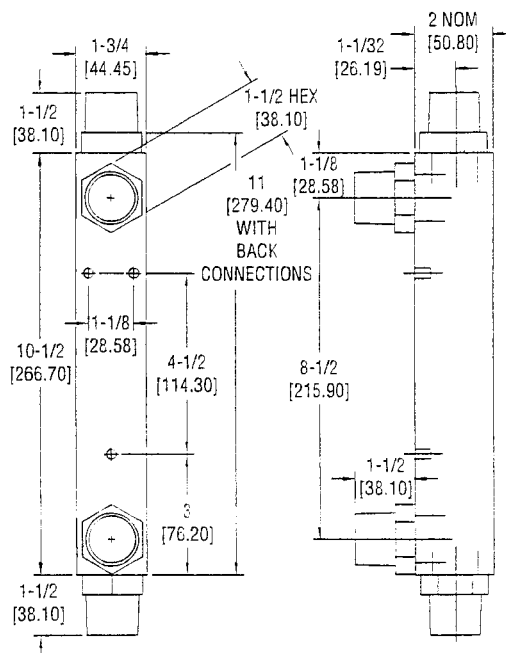
Dwyer Series VFC Visi-Float® flowmeters are available in two basic styles, either back or end connected with direct reading scales for air or water. Installation, operation, and maintenance are simple and require only a few common sense precautions to assure long, accurate, trouble-free service.

CALIBRATION

All Dwyer flowmeters are calibrated at the factory and normally will remain within their accuracy tolerance for the life of the device. If at any time you wish to re-check its calibration, do so only with instruments or equipment of certified accuracy. Do not attempt to check the Dwyer Visi-Float® flowmeter with a similar flowmeter as even minor variations in piping and back pressure can cause significant differences between the indicated and actual readings. If in doubt, your Dwyer flowmeter may be returned to the factory and checked for conformance at no charge.

LOCATION

Select a location where the flowmeter can be easily read and where the temperature will not exceed 120°F (49°C). The mounting surface and piping to the flowmeter should be free from vibration which could cause fatigue of fittings or mounting inserts. Piping must be carefully arranged and installed to avoid placing stress on fittings and/or flowmeter body. Avoid locations or applications with strong chlorine atmospheres or solvents such as benzene, acetone, carbon tetrachloride, etc. Damage due to contact with incompatible gases or liquids is not covered by warranty. Compatibility should be carefully determined before placing in service.



SPECIFICATIONS

Service: Compatible gases & liquids.

Wetted Materials:

Body: Acrylic plastic.

O-Ring: Buna-N (Viton® available).

Metal Parts: Stainless steel.

Float: Stainless steel.

Temperature & Pressure Limits: 100 psig (6.9 bar) @ 120°F (48°C).

Accuracy: 2% of full scale.

Process Connection: VFC: 1" female NPT back connections. End connections optional. VFCII: 1" male NPT back connections. End Connections optional.

Scale Length: 5" typical length.

Mounting Orientation: Mount in vertical position.

Weight: 24-25 oz (.68-.71 kg).

PIPING

Inlet Piping:

It is good practice to approach the flowmeter inlet with as few elbows, restrictions and size changes as possible. Inlet piping should be as close to the flowmeter connection size as practical to avoid turbulence which can occur with drastic size changes. The length of inlet piping has little effect on normal pressure fed flowmeters.

For vacuum service, the inlet piping should be as short and open as possible to allow operation at or near atmospheric pressure and maintain the accuracy of the device. Note that for vacuum service, any flow control valve used must be installed on the discharge side of the flowmeter.

DWYER INSTRUMENTS, INC.

P.O. BOX 373 • MICHIGAN CITY, IN 46361 U.S.A.

Phone: 219/879-8000

Fax: 219/872-9057

www.dwyer-inst.com

e-mail: info@dwyer-inst.com

APPENDIX D

LABORATORY ANALYTICAL REPORTS

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

**FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski**

Report Date: 2/28/2008
Re: Client Project ID: Win-Holt 562-08-09
York Project No.: 08020625

CT License No. PH-0723

New Jersey License No. CT-005

New York License No. 10854



Report Date: 2/28/2008
Client Project ID: Win-Holt 562-08-09
York Project No.: 08020625

FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 02/26/08. The project was identified as your project "Win-Holt 562-08-09".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Effluent	
York Sample ID			08020625-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Volatiles, TO-14 List	EPA TO-14A	ppbv	---	---
1,1,1-Trichloroethane			63.0	2.0
1,1,2,2-tetrachloroethane			Not detected	2.0
1,1,2-Trichloroethane			Not detected	2.0
1,1-Dichloroethane			Not detected	2.0
1,1-Dichloroethylene			Not detected	2.0
1,2,4-Trichlorobenzene			Not detected	2.0
1,2,4-Trimethylbenzene			Not detected	2.0
1,2-Dibromoethane			Not detected	2.0
1,2-Dichlorobenzene			Not detected	2.0
1,2-Dichloroethane			Not detected	2.0
1,2-Dichloropropane			Not detected	2.0
1,2-Dichlorotetrafluoroethane			Not detected	2.0
1,3,5-Trimethylbenzene			Not detected	2.0
1,3-Dichlorobenzene			Not detected	2.0
1,4-Dichlorobenzene			Not detected	2.0
3-Chloropropene			Not detected	2.0

YORK

Client Sample ID			Effluent	
York Sample ID			08020625-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
4-Ethyltoluene			Not detected	2.0
Benzene			10.0	2.0
Benzyl Chloride			Not detected	2.0
Bromomethane			Not detected	2.0
Carbon Tetrachloride			Not detected	2.0
Chlorobenzene			Not detected	2.0
Chloroethane			Not detected	2.0
Chloroform			Not detected	2.0
Chloromethane			Not detected	2.0
cis-1,2-Dichloroethylene			7.0	2.0
cis-1,3-Dichloropropylene			Not detected	2.0
Dichlorodifluoromethane			Not detected	2.0
Ethylbenzene			Not detected	2.0
Freon-113			Not detected	2.0
Hexachloro-1,3-Butadiene			Not detected	2.0
Methylene Chloride			Not detected	2.0
o-Xylene			Not detected	2.0
p- & m-Xylenes			Not detected	2.0
Styrene			Not detected	2.0
Tetrachloroethylene			29	2.0
Toluene			Not detected	2.0
trans-1,3-Dichloropropylene			Not detected	2.0
Trichloroethylene			472	2.0
Trichlorofluoromethane			Not detected	2.0
Vinyl Chloride			Not detected	2.0
Volatiles, TO-14 List	EPA TO14A	ug/cu.m.	---	---
1,1,1-Trichloroethane			350	11.1
1,1,2,2-tetrachloroethane			Not detected	14.0
1,1,2-Trichloroethane			Not detected	11.1
1,1-Dichloroethane			Not detected	8.20
1,1-Dichloroethylene			Not detected	8.10
1,2,4-Trichlorobenzene			Not detected	16.6
1,2,4-Trimethylbenzene			Not detected	10.0
1,2-Dibromoethane			Not detected	15.6
1,2-Dichlorobenzene			Not detected	12.0
1,2-Dichloroethane			Not detected	8.20
1,2-Dichloropropane			Not detected	9.40
1,2-Dichlorotetrafluoroethane			Not detected	10.0
1,3,5-Trimethylbenzene			Not detected	10.0
1,3-Dichlorobenzene			Not detected	12.2
1,4-Dichlorobenzene			Not detected	12.1
3-Chloropropene			Not detected	15.0
4-Ethyltoluene			Not detected	10.1
Benzene			32	6.50
Benzyl Chloride			Not detected	11.5
Bromomethane			Not detected	7.90
Carbon Tetrachloride			Not detected	12.8
Chlorobenzene			Not detected	9.40
Chloroethane			Not detected	5.40
Chloroform			Not detected	9.90
Chloromethane			Not detected	4.20

YORK

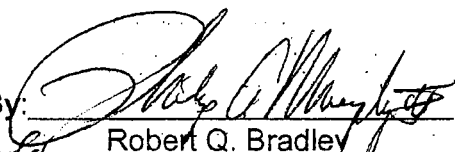
Client Sample ID			Effluent	
York Sample ID			08020625-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
cis-1,2-Dichloroethylene			29.0	8.10
cis-1,3-Dichloropropylene			Not detected	9.90
Dichlorodifluoromethane			Not detected	10.1
Ethylbenzene			Not detected	8.80
Freon-113			Not detected	15.6
Hexachloro-1,3-Butadiene			Not detected	14.2
Methylene Chloride			Not detected	7.10
o-Xylene			Not detected	8.80
p- & m-Xylenes			Not detected	8.80
Styrene			Not detected	8.70
Tetrachloroethylene			200	13.8
Toluene			Not detected	7.70
trans-1,3-Dichloropropylene			Not detected	10.1
Trichloroethylene			2580	10.9
Trichlorofluoromethane			Not detected	11.4
Vinyl Chloride			Not detected	5.20

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 08020625

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By:


Robert Q. Bradley
Managing Director

Date: 2/28/2008

YORK

YORK

Analytical Laboratories, Inc.

QA/QC Summary Report

Associated Samples: AD65139

28-Feb-08

Client: FPM Group

Analysis Name: **Volatiles(TO-14 list) QA ONLY**
Unit of Measure: ppbv

Batch Name: \$TO14_-26872

QA Sample #: AD65139
York's Sample ID: 08020625-01

Parameter	LCS(%)	Unspiked Result	Blank	Matrix Spike			Spike Duplicate		
				Amount	Result	Recovery, %	Duplicate	Recovery, %	Precision, RPD
1,2-Dichloroethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Benzyl Chloride	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Benzene	95	3.9	Not detected	5.0	5.4	108.0	3.8		2.6
4-Ethyltoluene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
3-Chloropropene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,4-Dichlorobenzene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,3-Dichlorobenzene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,3,5-Trimethylbenz	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1,1-Trichloroethan	92	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2-Dichloropropane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Chlorobenzene	97	Not detected	Not detected	5.0	5.8	116.0	Not detected		
1,2-Dichlorobenzene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2-Dibromoethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2,4-Trimethylbenz	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2,4-Trichlorobenze	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1-Dichloroethylene	98	Not detected	Not detected	5.0	5.2	104.0	Not detected		
1,1-Dichloroethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1,2-Trichloroethan	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1,2,2-tetrachloroet	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2-Dichlorotetrafluo	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Freon-113	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Trichlorofluorometha	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Trichloroethylene	95	Not detected	Not detected	5.0	5.3	106.0	3.5		0
trans-1,3-Dichloropr	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Toluene	102	Not detected	Not detected	5.0	5.4	108.0	Not detected		
Tetrachloroethylene	99	3.5	Not detected	Not detected	Not detected	Not detected	Not detected		
Styrene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		

YORK

YORK

Analytical Laboratories, Inc.

QA/QC Summary Report

p- & m-Xylenes	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
o-Xylene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Bromomethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Hexachloro-1,3-Buta	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Carbon Tetrachloride	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Ethylbenzene	99	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Dichlorodifluorometh	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
cis-1,3-Dichloroprop	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
cis-1,2-Dichloroethyl	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Chloromethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Chloroform	86	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Chloroethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Vinyl Chloride	109	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Methylene Chloride	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected

YORK

Field Chain-of-Custody Record

Company Name FRM	Report To: John Bukoski	Invoice To: same	Project ID/No. Win - Holt 502-08-09	John S Bukoski Samples Collected By (Signature) John S. Bukoski Name (Printed)
---------------------	----------------------------	---------------------	---	---

[illegible]

Chain-of-Custody Record		Sample Relinquished by		Sample Received in LAB by	
Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	Date/Time
		John S. Baskin	2/25/08 1600	[Signature]	2/26/08 11:00AM
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	Date/Time

<i>Comments/Special Instructions</i>	<i>Turn-Around Time</i>
	X Standard RUSH(define)

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski

Report Date: 10/24/2008
Re: Client Project ID: 562-08-09 / Win Holt
York Project No.: 08100460

CT License No. PH-0723

New Jersey License No. CT-005

New York License No. 10854



Report Date: 10/24/2008
Client Project ID: 562-08-09 / Win Holt
York Project No.: 08100460

FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 10/10/08. The project was identified as your project "562-08-09 / Win Holt".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Effluent 1009	
York Sample ID			08100460-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Volatiles, TO-15 List	EPA TO15	ppbv	---	---
1,1,1-Trichloroethane			230	5.0
1,1,2,2-tetrachloroethane			Not detected	5.0
1,1,2-Trichloroethane			Not detected	5.0
1,1-Dichloroethane			Not detected	5.0
1,1-Dichloroethylene			Not detected	5.0
1,2,4-Trichlorobenzene			Not detected	5.0
1,2,4-Trimethylbenzene			Not detected	5.0
1,2-Dibromoethane			Not detected	5.0
1,2-Dichlorobenzene			Not detected	5.0
1,2-Dichloroethane			Not detected	5.0
1,2-Dichloropropane			Not detected	5.0
1,2-Dichlorotetrafluoroethane			Not detected	5.0
1,3,5-Trimethylbenzene			Not detected	5.0
1,3-Butadiene			Not detected	5.0
1,3-Dichlorobenzene			Not detected	5.0
1,4-Dichlorobenzene			Not detected	5.0

YORK

Client Sample ID			Effluent 1009	
York Sample ID			08100460-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
2,2,4-Trimethylpentane			Not detected	5.0
4-Ethyltoluene			Not detected	5.0
Acetone			95	5.0
Allyl Chloride			Not detected	5.0
Benzene			Not detected	5.0
Bromodichloromethane			Not detected	5.0
Bromoform			Not detected	5.0
Bromomethane			Not detected	5.0
Carbon Disulfide			Not detected	5.0
Carbon Tetrachloride			Not detected	5.0
Chlorobenzene			Not detected	5.0
Chloroethane			Not detected	5.0
Chloroform			Not detected	5.0
Chloromethane			Not detected	5.0
cis-1,2-Dichloroethylene			Not detected	5.0
cis-1,3-Dichloropropylene			Not detected	5.0
Cyclohexane			Not detected	5.0
Dibromochloromethane			Not detected	5.0
Dichlorodifluoromethane			Not detected	5.0
Ethyl acetate			Not detected	5.0
Ethylbenzene			Not detected	5.0
Freon-113			Not detected	5.0
Hexachloro-1,3-Butadiene			Not detected	5.0
Isopropanol			8.6	5.0
Methyl Ethyl ketone			43	5.0
Methyl Isobutyl ketone			Not detected	5.0
Methylene Chloride			Not detected	5.0
MTBE			Not detected	5.0
n-Heptane			Not detected	5.0
n-Hexane			20	5.0
o-Xylene			Not detected	5.0
p- & m-Xylenes			Not detected	5.0
Propylene			Not detected	5.0
Styrene			Not detected	5.0
Tetrachloroethylene			13	5.0
Tetrahydrofuran			Not detected	5.0
Toluene			Not detected	5.0
trans-1,2-Dichloroethylene			Not detected	5.0
trans-1,3-Dichloropropylene			Not detected	5.0
Trichloroethylene			70	5.0
Trichlorofluoromethane			8.4	5.0
Vinyl acetate			Not detected	5.0
Vinyl Bromide			Not detected	5.0
Vinyl Chloride			Not detected	5.0
Volatiles, TO-15 List	EPA TO15	ug/cu.m.	---	---
1,1,1-Trichloroethane			1300	27.8
1,1,2,2-tetrachloroethane			Not detected	35.0
1,1,2-Trichloroethane			Not detected	27.8
1,1-Dichloroethane			Not detected	20.5
1,1-Dichloroethylene			Not detected	20.2
1,2,4-Trichlorobenzene			Not detected	41.5

YORK

Client Sample ID			Effluent 1009	
York Sample ID			08100460-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
1,2,4-Trimethylbenzene			Not detected	25.0
1,2-Dibromoethane			Not detected	39.0
1,2-Dichlorobenzene			Not detected	30.5
1,2-Dichloroethane			Not detected	20.5
1,2-Dichloropropane			Not detected	23.5
1,2-Dichlorotetrafluoroethane			Not detected	25.0
1,3,5-Trimethylbenzene			Not detected	25.0
1,3-Butadiene			Not detected	11.2
1,3-Dichlorobenzene			Not detected	30.5
1,4-Dichlorobenzene			Not detected	30.5
2,2,4-Trimethylpentane			Not detected	23.8
4-Ethyltoluene			Not detected	25.0
Acetone			230	12.0
Allyl Chloride			Not detected	16.0
Benzene			Not detected	16.2
Bromodichloromethane			Not detected	34.0
Bromoform			Not detected	52.5
Bromomethane			Not detected	19.8
Carbon Disulfide			Not detected	15.8
Carbon Tetrachloride			Not detected	32.0
Chlorobenzene			Not detected	23.5
Chloroethane			Not detected	13.5
Chloroform			Not detected	24.8
Chloromethane			Not detected	10.5
cis-1,2-Dichloroethylene			Not detected	20.2
cis-1,3-Dichloropropylene			Not detected	24.8
Cyclohexane			Not detected	17.5
Dibromochloromethane			Not detected	43.2
Dichlorodifluoromethane			Not detected	25.2
Ethyl acetate			Not detected	18.8
Ethylbenzene			Not detected	22.0
Freon-113			Not detected	39.0
Hexachloro-1,3-Butadiene			Not detected	35.5
Isopropanol			22	12.5
Methyl Ethyl ketone			130	15.0
Methyl Isobutyl ketone			Not detected	20.8
Methylene Chloride			Not detected	17.8
MTBE			Not detected	18.2
n-Heptane			Not detected	20.8
n-Hexane			72	18.0
o-Xylene			Not detected	22.0
p- & m-Xylenes			Not detected	22.0
Propylene			Not detected	8.75
Styrene			Not detected	21.8
Tetrachloroethylene			90	34.5
Tetrahydrofuran			Not detected	15.0
Toluene			Not detected	19.2
trans-1,2-Dichloroethylene			Not detected	20.2
trans-1,3-Dichloropropylene			Not detected	25.2
Trichloroethylene			380	27.2
Trichlorofluoromethane			48	28.5

YORK

Client Sample ID			Effluent 1009	
York Sample ID			08100460-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Vinyl acetate			Not detected	18.0
Vinyl Bromide			Not detected	22.2
Vinyl Chloride			Not detected	13.0

Units Key:

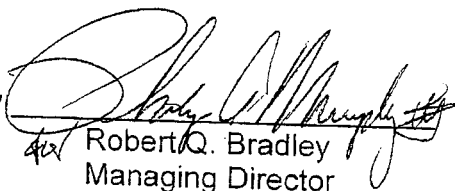
For Waters/Liquids: mg/L = ppm ; ug/L = ppb

For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 08100460

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By


Robert Q. Bradley
Managing Director

Date: 10/24/2008

YORK

YORK

Analytical Laboratories, Inc.

QA/QC Summary Report

Associated Samples: AD95170

24-Oct-08

Client: FPM Group

Analysis Name: *Volatile Organics, TO-15 List QA*
Unit of Measure: ppbv

Batch Name: STO15_-30512

QA Sample #: AD95170
York's Sample ID: 08100460-01

Parameter	LCS(%)	Unspiked Result	Blank	Matrix Spike			Spike Duplicate		
				Amount	Result	Recovery, %	Duplicate	Recovery, %	Precision, RPD
Chloroform	90	Not detected	Not detected	Not detected	Not detected		Not detected		Not detected
Chlorobenzene	92	Not detected	Not detected	5	5.1	102.0	Not detected		Not detected
1,1,1-Trichloroethan	92	Not detected	Not detected	Not detected	Not detected		Not detected		Not detected
Benzene	90	4.6	Not detected	5	5.1	102.0	4.4		8.7
1,1-Dichloroethylene	94	Not detected	Not detected	5	5.6	112.0	Not detected		Not detected

YORK

YORK

Analytical Laboratories, Inc.

QA/QC Summary Report

Toluene	98	Not detected	Not detected	5	5.4	108.0	Not detected	Not detected
Trichloroethylene	88	6.2	Not detected	5	4.9	98.0	5.6	10.2
Tetrachloroethylene	94	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Ethylbenzene	90	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Vinyl Chloride	90	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected

YORK

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski

Report Date: 1/13/2009
Re: Client Project ID: 562-08-09 / Win-Holt
York Project No.: 09010145

CT License No. PH-0723

New Jersey License No. CT-005

New York License No. 10854



Report Date: 1/13/2009
Client Project ID: 562-08-09 / Win-Holt
York Project No.: 09010145

FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 01/08/09. The project was identified as your project "562-08-09 / Win-Holt".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Effluent 0107	
York Sample ID			09010145-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Volatiles, TO-14 List	EPA TO-14A	ppbv	---	---
1,1,1-Trichloroethane			850	2.0
1,1,2,2-tetrachloroethane			Not detected	2.0
1,1,2-Trichloroethane			Not detected	2.0
1,1-Dichloroethane			Not detected	2.0
1,1-Dichloroethylene			Not detected	2.0
1,2,4-Trichlorobenzene			Not detected	2.0
1,2,4-Trimethylbenzene			Not detected	2.0
1,2-Dibromoethane			Not detected	2.0
1,2-Dichlorobenzene			Not detected	2.0
1,2-Dichloroethane			Not detected	2.0
1,2-Dichloropropane			Not detected	2.0
1,2-Dichlorotetrafluoroethane			Not detected	2.0
1,3,5-Trimethylbenzene			Not detected	2.0
1,3-Dichlorobenzene			Not detected	2.0
1,4-Dichlorobenzene			Not detected	2.0
3-Chloropropene			Not detected	2.0

YORK

Client Sample ID			Effluent 0107	
York Sample ID			09010145-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
4-Ethyltoluene			Not detected	2.0
Benzene			5.8	2.0
Benzyl Chloride			Not detected	2.0
Bromomethane			Not detected	2.0
Carbon Tetrachloride			Not detected	2.0
Chlorobenzene			Not detected	2.0
Chloroethane			Not detected	2.0
Chloroform			Not detected	2.0
Chloromethane			Not detected	2.0
cis-1,2-Dichloroethylene			Not detected	2.0
cis-1,3-Dichloropropylene			Not detected	2.0
Dichlorodifluoromethane			Not detected	2.0
Ethylbenzene			Not detected	2.0
Freon-113			Not detected	2.0
Hexachloro-1,3-Butadiene			Not detected	2.0
Methylene Chloride			Not detected	2.0
o-Xylene			Not detected	2.0
p- & m-Xylenes			Not detected	2.0
Styrene			Not detected	2.0
Tetrachloroethylene			18	2.0
Toluene			9	2.0
trans-1,3-Dichloropropylene			Not detected	2.0
Trichloroethylene			70	2.0
Trichlorofluoromethane			Not detected	2.0
Vinyl Chloride			Not detected	2.0
Volatiles, TO-14 List	EPA TO14A	ug/cu.m.	---	---
1,1,1-Trichloroethane			4700	11.1
1,1,2,2-tetrachloroethane			Not detected	14.0
1,1,2-Trichloroethane			Not detected	11.1
1,1-Dichloroethane			Not detected	8.20
1,1-Dichloroethylene			Not detected	8.10
1,2,4-Trichlorobenzene			Not detected	16.6
1,2,4-Trimethylbenzene			Not detected	10.0
1,2-Dibromoethane			Not detected	15.6
1,2-Dichlorobenzene			Not detected	12.0
1,2-Dichloroethane			Not detected	8.20
1,2-Dichloropropane			Not detected	9.40
1,2-Dichlorotetrafluoroethane			Not detected	10.0
1,3,5-Trimethylbenzene			Not detected	10.0
1,3-Dichlorobenzene			Not detected	12.2
1,4-Dichlorobenzene			Not detected	12.1
3-Chloropropene			Not detected	15.0
4-Ethyltoluene			Not detected	10.1
Benzene			19	6.50
Benzyl Chloride			Not detected	11.5
Bromomethane			Not detected	7.90
Carbon Tetrachloride			Not detected	12.8
Chlorobenzene			Not detected	9.40
Chloroethane			Not detected	5.40
Chloroform			Not detected	9.90
Chloromethane			Not detected	4.20

YORK

Client Sample ID			Effluent 0107	
York Sample ID			09010145-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
cis-1,2-Dichloroethylene			Not detected	8.10
cis-1,3-Dichloropropylene			Not detected	9.90
Dichlorodifluoromethane			Not detected	10.1
Ethylbenzene			Not detected	8.80
Freon-113			Not detected	15.6
Hexachloro-1,3-Butadiene			Not detected	14.2
Methylene Chloride			Not detected	7.10
o-Xylene			Not detected	8.80
p- & m-Xylenes			Not detected	8.80
Styrene			Not detected	8.70
Tetrachloroethylene			120	13.8
Toluene			35	7.70
trans-1,3-Dichloropropylene			Not detected	10.1
Trichloroethylene			380	10.9
Trichlorofluoromethane			Not detected	11.4
Vinyl Chloride			Not detected	5.20

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 09010145

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: _____

Robert Q. Bradley
Managing Director

Date: 1/13/2009

YORK

YORK

Analytical Laboratories, Inc.

QA/QC Summary Report

Associated Samples: AE05176

13-Jan-09

Client: FPM Group

Analysis Name: **Volatiles(TO-14 list) QA ONLY**
Unit of Measure: ppbv

Batch Name: \$TO14_-31921

QA Sample #: AE05176
York's Sample ID: 09010145-01

Parameter	LCS(%)	Unspiked Result	Blank	Matrix Spike			Spike Duplicate		
				Amount	Result	Recovery, %	Duplicate	Recovery, %	Precision, RPD
1,2-Dichloroethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Benzyl Chloride	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Benzene	94	4.4	Not detected	5	5.4	108.0	4.6		4.4
4-Ethyltoluene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
3-Chloropropene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,4-Dichlorobenzene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,3-Dichlorobenzene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,3,5-Trimethylbenz	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1,1-Trichloroethan	98	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2-Dichloropropane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Chlorobenzene	94	Not detected	Not detected	5	5.4	108.0	Not detected		
1,2-Dichlorobenzene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2-Dibromoethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2,4-Trimethylbenz	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2,4-Trichlorobenze	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1-Dichloroethylene	90	Not detected	Not detected	5	5.2	104.0	Not detected		
1,1-Dichloroethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1,2-Trichloroethan	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,1,2,2-tetrachloroet	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
1,2-Dichlorotetrafluo	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Freon-113	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Trichlorofluorometha	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Trichloroethylene	92	3.8	Not detected	5	5.3	106.0	3.9		2.6
trans-1,3-Dichloropr	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Toluene	90	Not detected	Not detected	5	5.8	116.0	Not detected		
Tetrachloroethylene	88	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		
Styrene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected		

YORK

YORK

Analytical Laboratories, Inc.

QA/QC Summary Report

p- & m-Xylenes	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
o-Xylene	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Bromomethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Hexachloro-1,3-Buta	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Carbon Tetrachloride	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Ethylbenzene	94	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Dichlorodifluorometh	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
cis-1,3-Dichloroprop	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
cis-1,2-Dichloroethyl	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Chloromethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Chloroform	90	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Chloroethane	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Vinyl Chloride	92	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected
Methylene Chloride	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected	Not detected

YORK

YORK

ANALYTICAL LABORATORIES, INC.

120 RESEARCH DRIVE

STRATFORD, CT 06615

(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Page 1 of 1Company Name

FPM

Report to:

John Bukaski

Invoice to:

Same

Project ID/No.Win - Holt
562-08-09York Project No.:

09010145

Samples Collected by (signature)

ANDREW McAULEY

Name (printed)

Sample No.

Location/ID

Date Sampled

Sample Matrix

Water

Soil

Air

Other

Analyses Requested

Container Desc.

Effluent 0107

1/7/09

X

TO-14 VOCs

1x Teflon Bag

Temperature upon receipt at Lab

°C

AIRBAG

Chain-of-Custody Record

Samples Relinquished by

Date/Time

Samples received by

Date/Time

Samples Relinquished by

Date/Time

Samples received in LAB by

Date/Time

Comments/Special Instructions

Turn-Around Time Requested- Specify Date Expected

if RUSH Requested: DATE DUE FOR RUSH:

X STANDARD

RUSH(Define)

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski

Report Date: 5/14/2009
Re: Client Project ID: 562-08-09 / Win-Holt
York Project No.: 09050253

CT License No. PH-0723

New Jersey License No. CT-005

New York License No. 10854



Report Date: 5/14/2009
Client Project ID: 562-08-09 / Win-Holt
York Project No.: 09050253

FPM Group
909 Marconi Avenue
Ronkonkoma, New York 11779
Attention: John Bukoski

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 05/08/09. The project was identified as your project "562-08-09 / Win-Holt".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Effluent 0507	
York Sample ID			09050253-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
Volatiles, TO-14 List	EPA TO-14A	ppbv	---	---
1,1,1-Trichloroethane			860	12
1,1,2,2-tetrachloroethane			Not detected	12
1,1,2-Trichloroethane			Not detected	12
1,1-Dichloroethane			Not detected	12
1,1-Dichloroethylene			Not detected	12
1,2,4-Trichlorobenzene			Not detected	12
1,2,4-Trimethylbenzene			Not detected	12
1,2-Dibromoethane			Not detected	12
1,2-Dichlorobenzene			Not detected	12
1,2-Dichloroethane			Not detected	12
1,2-Dichloropropane			Not detected	12
1,2-Dichlorotetrafluoroethane			Not detected	12
1,3,5-Trimethylbenzene			Not detected	12
1,3-Dichlorobenzene			Not detected	12
1,4-Dichlorobenzene			Not detected	12
3-Chloropropene			Not detected	12

YORK

Client Sample ID			Effluent 0507	
York Sample ID			09050253-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
4-Ethyltoluene			Not detected	12
Benzene			Not detected	12
Benzyl Chloride			Not detected	12
Bromomethane			Not detected	12
Carbon Tetrachloride			Not detected	12
Chlorobenzene			Not detected	12
Chloroethane			Not detected	12
Chloroform			Not detected	12
Chloromethane			Not detected	12
cis-1,2-Dichloroethylene			Not detected	12
cis-1,3-Dichloropropylene			Not detected	12
Dichlorodifluoromethane			Not detected	12
Ethylbenzene			Not detected	12
Freon-113			Not detected	12
Hexachloro-1,3-Butadiene			Not detected	12
Methylene Chloride			Not detected	12
o-Xylene			Not detected	12
p- & m-Xylenes			11	12
Styrene			Not detected	12
Tetrachloroethylene			26	12
Toluene			Not detected	12
trans-1,3-Dichloropropylene			Not detected	12
Trichloroethylene			160	12
Trichlorofluoromethane			Not detected	12
Vinyl Chloride			Not detected	12
Volatiles, TO-14 List	EPA TO14A	ug/cu.m.	---	---
1,1,1-Trichloroethane			4800	69.2
1,1,2,2-tetrachloroethane			Not detected	87.2
1,1,2-Trichloroethane			Not detected	69.2
1,1-Dichloroethane			Not detected	51.5
1,1-Dichloroethylene			Not detected	50.5
1,2,4-Trichlorobenzene			Not detected	94.2
1,2,4-Trimethylbenzene			Not detected	62.5
1,2-Dibromoethane			Not detected	97.8
1,2-Dichlorobenzene			Not detected	76.5
1,2-Dichloroethane			Not detected	51.5
1,2-Dichloropropane			Not detected	58.8
1,2-Dichlorotetrafluoroethane			Not detected	88.8
1,3,5-Trimethylbenzene			Not detected	62.5
1,3-Dichlorobenzene			Not detected	76.5
1,4-Dichlorobenzene			Not detected	76.5
3-Chloropropene			Not detected	39.8
4-Ethyltoluene			Not detected	62.5
Benzene			Not detected	40.5
Benzyl Chloride			Not detected	65.8
Bromomethane			Not detected	49.2
Carbon Tetrachloride			Not detected	80.0
Chlorobenzene			Not detected	58.5
Chloroethane			Not detected	33.5
Chloroform			Not detected	62.0
Chloromethane			Not detected	26.2

YORK

Client Sample ID			Effluent 0507	
York Sample ID			09050253-01	
Matrix			AIR	
Parameter	Method	Units	Results	MDL
cis-1,2-Dichloroethylene			Not detected	50.5
cis-1,3-Dichloropropylene			Not detected	57.8
Dichlorodifluoromethane			Not detected	62.8
Ethylbenzene			Not detected	55.2
Freon-113			Not detected	97.5
Hexachloro-1,3-Butadiene			Not detected	136
Methylene Chloride			Not detected	44.2
o-Xylene			Not detected	55.2
p- & m-Xylenes			49	55.2
Styrene			Not detected	54.0
Tetrachloroethylene			180	86.2
Toluene			Not detected	48.0
trans-1,3-Dichloropropylene			Not detected	57.8
Trichloroethylene			880	68.2
Trichlorofluoromethane			Not detected	71.5
Vinyl Chloride			Not detected	32.5

Units Key:

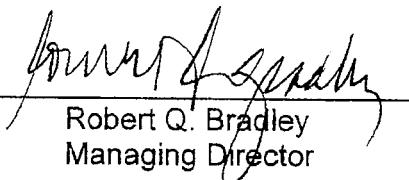
For Waters/Liquids: mg/L = ppm ; ug/L = ppb

For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 09050253

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By:


Robert Q. Bradley
Managing Director

Date: 5/14/2009

YORK

YORK

ANALYTICAL LABORATORIES, INC.

120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document.

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York Project No. 09050753

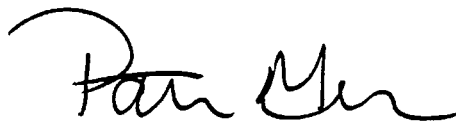
Page 1 of 1

Client Information		Report To:		Invoice To:		Client Project ID		Turn-Around Time		Report Type/Deliverables																																																																																																																																																			
Company: FPM GROUP		Company: SAME		Company: SAME		WIN-HO-1		24 hr		Summary Results Only																																																																																																																																																			
Address: 100 MARCONI AVE		Address:		Address:		562-08-09		48 hr		QA/QC Summary																																																																																																																																																			
Phone No. 631-757-6200		Phone No.		Phone No.		Purchase Order No.		72 hr		RCP Package ASP B Pkg																																																																																																																																																			
Contact Person: J. Bukaski		Attention:		Attention:				5 Day		ASP A Pkg Excel format																																																																																																																																																			
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<p>Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.</p> <p><i>[Signature]</i> Samples Collected/Authorized By (Signature) ANDREW McAVLEY Name (printed)</p>																																																																																																																																																													
Sample Identification	Date Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below																																																																																																																																																										
Effluent 0507	5/11/09	AIR	<table border="1"> <thead> <tr> <th colspan="3">Volatiles</th> <th colspan="3">Semi-Volatiles</th> <th colspan="3">Metals</th> <th colspan="3">Miscellaneous Parameters</th> <th colspan="2">Special Instructions</th> </tr> <tr> <th>8260 full</th> <th>Site Spec.</th> <th>8270 or 625</th> <th>PCB/CB/HC</th> <th>RCRA8</th> <th>TPH GRO</th> <th>Corrosivity</th> <th>Nitrate</th> <th>Color</th> <th>Field Filled</th> <th>Lab to Filter</th> </tr> </thead> <tbody> <tr> <td>624</td> <td>Site Spec.</td> <td>STARS</td> <td>8082 PCB</td> <td>PP13</td> <td>TPH DRO <td>Reactivity <td>Nitrite <td>Phenols <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </td></td></td></td></tr> <tr> <td>STARS</td> <td>SPL or TCLP</td> <td>BN Only</td> <td>8081 Pest</td> <td>TAL</td> <td>CT ETHP</td> <td>Ignitability</td> <td>TKN</td> <td>Cyanide-T</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>BTEX</td> <td>Benzene</td> <td>Acids Only</td> <td>CT RCP</td> <td>CT15</td> <td>NY 310-13</td> <td>Flash Point</td> <td>Total Nitrogen</td> <td>Cyanide-A</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>MTBE</td> <td>Nassau Co.</td> <td>PAH</td> <td>App. IX</td> <td>Total</td> <td>TPH 418.1</td> <td>Sieve Anal.</td> <td>Ammonia-N</td> <td>BOD5</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>TCL list</td> <td>Surfalk Co.</td> <td>TAGM</td> <td>Site Spec.</td> <td>Dissolved</td> <td>Air TO14A</td> <td>Heterotrophs</td> <td>Chloride</td> <td>CEODS</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>TAGM</td> <td>Ketones</td> <td>CT RCP</td> <td>SPL or TCLP</td> <td>SPL or TCLP</td> <td>Air TO15</td> <td>TOX</td> <td>Phosphate</td> <td>BOD28</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>CT RCP</td> <td>Oxyanions</td> <td>TCL list</td> <td>TCLP Pest</td> <td>TCLP list</td> <td>Air VPH</td> <td>BTU/lb.</td> <td>Total Phos.</td> <td>COD</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Atom.</td> <td>TCLP list</td> <td>App. IX</td> <td>TCLP Herb</td> <td>CT15</td> <td>Hg, Pb, As, Cd</td> <td>Aqueous Tox.</td> <td>Oil/Grease</td> <td>TSS</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Halog.</td> <td>524.2</td> <td>App. IX</td> <td>Chloridant</td> <td>CT15</td> <td>Cr, Ni, Be, Fe, Methane</td> <td>NYCDEP Source</td> <td>F.O.G.</td> <td>Total Solids</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>App. IX</td> <td>502.2</td> <td>SPL or TCLP</td> <td>8082 PCB</td> <td>CT15</td> <td>Sa, Ti, Sb, Cu</td> <td>NYCDEP Source</td> <td>pH</td> <td>TDS</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>8021B list</td> <td>5035</td> <td>TCLP BNA</td> <td>8082 PCB</td> <td>CT15</td> <td>Na, Mn, As, Se, Helium</td> <td>NYCDEP Source</td> <td>Specific Conductance</td> <td>TPH-JR</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>									Volatiles			Semi-Volatiles			Metals			Miscellaneous Parameters			Special Instructions		8260 full	Site Spec.	8270 or 625	PCB/CB/HC	RCRA8	TPH GRO	Corrosivity	Nitrate	Color	Field Filled	Lab to Filter	624	Site Spec.	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Comments Preservation: Check those Applicable HCl MeOH HNO ₃ H ₂ SO ₄ NaOH Other			Temperature on Receipt: 14 °C																																																																																																																																																										

ANALYTICAL REPORT

Job Number: 220-4043-1
SDG Number: 220-4043
Job Description: WIN-HOLT

For:
FPM Group Limited
909 Marconi Avenue
Ronkonkoma, NY 11779
Attention: Mr. John Bukoski



Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
02/12/2008

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

TestAmerica Laboratories, Inc.

TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484

Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com



Case Narrative for Job: 220-4043-1

Client: FPM Group Limited
Date: February 12, 2008

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



Lawrence Decker
Laboratory Director

February 12, 2008

Date

Job Narrative
220-J4043-1

Comments

No additional comments.

Receipt

Trip Blank was received containing a small bubble in one of the two vials that was received.

Samples were received at the laboratory with no sample collection times documented on the chain of custody.

All other samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

SAMPLE SUMMARY

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-4043-1	W-2	Water	01/30/2008 0000	02/01/2008 0951
220-4043-2	W-2A	Water	01/30/2008 0000	02/01/2008 0951
220-4043-3	W-3	Water	01/30/2008 0000	02/01/2008 0951
220-4043-4	W-4	Water	01/30/2008 0000	02/01/2008 0951
220-4043-5	W-5	Water	01/30/2008 0000	02/01/2008 0951
220-4043-6	W-6	Water	01/30/2008 0000	02/01/2008 0951
220-4043-7	W-7	Water	01/30/2008 0000	02/01/2008 0951
220-4043-8	W-8	Water	01/30/2008 0000	02/01/2008 0951
220-4043-9	W-8D	Water	01/30/2008 0000	02/01/2008 0951
220-4043-10	FB	Water	01/30/2008 0000	02/01/2008 0951
220-4043-11TB	TRIP BLANK	Water	01/30/2008 0000	02/01/2008 0951

METHOD SUMMARY

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL CT	SW846 8260B	
Purge-and-Trap	TAL CT		SW846 5030B

Lab References:

TAL CT = TestAmerica Connecticut

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: FPM Group Limited

Job Number: 220-4043-1
Sdg Number: 220-4043

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: W-2

Lab Sample ID: 220-4043-1

Client Matrix: Water

Date Sampled: 01/30/2008 0000

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13121

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4211.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 02/01/2008 1611

Final Weight/Volume: 5 mL

Date Prepared: 02/01/2008 1611

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	0.31	J M	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	21		0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	1.8	J	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0
Surrogate	%Rec	Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	82	53 - 125		
4-Bromofluorobenzene	104	73 - 127		
Dibromofluoromethane	82	54 - 137		
Toluene-d8 (Surr)	87	63 - 121		

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: W-2A

Lab Sample ID: 220-4043-2

Date Sampled: 01/30/2008 0000

Client Matrix: Water

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch:	220-13121	Instrument ID:	HP 5890/5971 GC/MS
Preparation:	5030B			Lab File ID:	L4212.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	02/01/2008 1636			Final Weight/Volume:	5 mL
Date Prepared:	02/01/2008 1636				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	5.0	U	0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	82	53 - 125
4-Bromofluorobenzene	103	73 - 127
Dibromofluoromethane	82	54 - 137
Toluene-d8 (Surr)	82	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: W-3

Lab Sample ID: 220-4043-3

Client Matrix: Water

Date Sampled: 01/30/2008 0000

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13121

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4213.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 02/01/2008 1701

Final Weight/Volume: 5 mL

Date Prepared: 02/01/2008 1701

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	0.71	J	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	33		0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	2.2	J	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80	53 - 125
4-Bromofluorobenzene	105	73 - 127
Dibromofluoromethane	82	54 - 137
Toluene-d8 (Surr)	83	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: W-4

Lab Sample ID: 220-4043-4

Date Sampled: 01/30/2008 0000

Client Matrix: Water

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13121

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4214.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 02/01/2008 1724

Final Weight/Volume: 5 mL

Date Prepared: 02/01/2008 1724

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	26		0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	2.0	J	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	81	53 - 125
4-Bromofluorobenzene	111	73 - 127
Dibromofluoromethane	85	54 - 137
Toluene-d8 (Surr)	87	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: W-5

Lab Sample ID: 220-4043-5

Client Matrix: Water

Date Sampled: 01/30/2008 0000

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13121

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4215.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 02/01/2008 1748

Final Weight/Volume: 5 mL

Date Prepared: 02/01/2008 1748

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	55		0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	0.81	J	0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	69		53 - 125	
4-Bromofluorobenzene	96		73 - 127	
Dibromofluoromethane	71		54 - 137	
Toluene-d8 (Surr)	75		63 - 121	

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: W-6

Lab Sample ID: 220-4043-6

Client Matrix: Water

Date Sampled: 01/30/2008 0000

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B
Preparation: 5030B
Dilution: 10
Date Analyzed: 02/04/2008 1303
Date Prepared: 02/04/2008 1303

Analysis Batch: 220-13151

Instrument ID: HP 5890/5971 GC/MS

Lab File ID: L4244.D

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	100	U	16	100
Benzene	50	U	2.3	50
Bromodichloromethane	50	U	2.4	50
Bromoform	50	U	12	50
Bromomethane	50	U	10	50
Methyl Ethyl Ketone	100	U	11	100
Carbon disulfide	50	U	1.4	50
Carbon tetrachloride	50	U	2.9	50
Chlorobenzene	50	U	1.5	50
Chloroethane	50	U	4.8	50
Chloroform	50	U	2.7	50
Chloromethane	50	U	2.4	50
Dibromochloromethane	50	U	2.1	50
1,1-Dichloroethane	35	J	2.3	50
1,2-Dichloroethane	50	U	2.5	50
1,1-Dichloroethene	32	J	2.5	50
1,2-Dichloropropane	50	U	3.2	50
cis-1,3-Dichloropropene	50	U	2.8	50
trans-1,3-Dichloropropene	50	U	2.8	50
Ethylbenzene	50	U	2.8	50
2-Hexanone	100	U	3.7	100
Methylene Chloride	50	U	2.6	50
methyl isobutyl ketone	100	U	3.8	100
Styrene	50	U	7.0	50
1,1,2,2-Tetrachloroethane	50	U	2.3	50
Tetrachloroethene	50	U	3.0	50
Toluene	50	U	0.90	50
1,1,1-Trichloroethane	1400		3.8	50
1,1,2-Trichloroethane	50	U	3.3	50
Trichloroethene	50	U	2.6	50
Vinyl chloride	50	U	3.0	50
Xylenes, Total	50	U	4.6	50
cis-1,2-Dichloroethene	50	U	3.3	50
trans-1,2-Dichloroethene	50	U	2.2	50

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	82	53 - 125
4-Bromofluorobenzene	107	73 - 127
Dibromofluoromethane	84	54 - 137
Toluene-d8 (Surr)	89	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Client Sample ID: W-7

Sdg Number: 220-4043

Lab Sample ID: 220-4043-7

Date Sampled: 01/30/2008 0000

Client Matrix: Water

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13151

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4258.D

Dilution: 2.0

Initial Weight/Volume: 5 mL

Date Analyzed: 02/04/2008 1903

Final Weight/Volume: 5 mL

Date Prepared: 02/04/2008 1903

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	20	U	3.2	20
Benzene	10	U	0.46	10
Bromodichloromethane	10	U	0.48	10
Bromoform	10	U	2.3	10
Bromomethane	10	U	2.0	10
Methyl Ethyl Ketone	20	U	2.1	20
Carbon disulfide	10	U	0.28	10
Carbon tetrachloride	10	U	0.58	10
Chlorobenzene	10	U	0.30	10
Chloroethane	10	U	0.96	10
Chloroform	10	U	0.54	10
Chloromethane	10	U	0.48	10
Dibromochloromethane	10	U	0.42	10
1,1-Dichloroethane	10	U	0.46	10
1,2-Dichloroethane	10	U	0.50	10
1,1-Dichloroethene	6.3	J	0.50	10
1,2-Dichloropropane	10	U	0.64	10
cis-1,3-Dichloropropene	10	U	0.56	10
trans-1,3-Dichloropropene	10	U	0.56	10
Ethylbenzene	10	U	0.56	10
2-Hexanone	20	U	0.74	20
Methylene Chloride	10	U	0.52	10
methyl isobutyl ketone	20	U	0.76	20
Styrene	10	U	1.4	10
1,1,2,2-Tetrachloroethane	10	U	0.46	10
Tetrachloroethene	10	U	0.60	10
Toluene	10	U	0.18	10
1,1,1-Trichloroethane	170		0.76	10
1,1,2-Trichloroethane	10	U	0.66	10
Trichloroethene	10	U	0.52	10
Vinyl chloride	10	U	0.60	10
Xylenes, Total	1.3	J	0.92	10
cis-1,2-Dichloroethene	10	U	0.66	10
trans-1,2-Dichloroethene	10	U	0.44	10
Surrogate	%Rec		Acceptance Limits	
1,2-Dichloroethane-d4 (Surr)	80		53 - 125	
4-Bromofluorobenzene	107		73 - 127	
Dibromofluoromethane	84		54 - 137	
Toluene-d8 (Surr)	83		63 - 121	

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1
Sdg Number: 220-4043

Client Sample ID: W-8

Lab Sample ID: 220-4043-8

Client Matrix: Water

Date Sampled: 01/30/2008 0000

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13215

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4318.D

Dilution: 10

Initial Weight/Volume: 5 mL

Date Analyzed: 02/06/2008 1314

Final Weight/Volume: 5 mL

Date Prepared: 02/06/2008 1314

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	100	U	16	100
Benzene	50	U	2.3	50
Bromodichloromethane	50	U	2.4	50
Bromoform	50	U	12	50
Bromomethane	50	U	10	50
Methyl Ethyl Ketone	100	U	11	100
Carbon disulfide	50	U	1.4	50
Carbon tetrachloride	50	U	2.9	50
Chlorobenzene	50	U	1.5	50
Chloroethane	50	U	4.8	50
Chloroform	50	U	2.7	50
Chloromethane	50	U	2.4	50
Dibromochloromethane	50	U	2.1	50
1,1-Dichloroethane	50	U	2.3	50
1,2-Dichloroethane	50	U	2.5	50
1,1-Dichloroethene	50	U	2.5	50
1,2-Dichloropropane	50	U	3.2	50
cis-1,3-Dichloropropene	50	U	2.8	50
trans-1,3-Dichloropropene	50	U	2.8	50
Ethylbenzene	380		2.8	50
2-Hexanone	100	U	3.7	100
Methylene Chloride	50	U	2.6	50
methyl isobutyl ketone	100	U	3.8	100
Styrene	50	U	7.0	50
1,1,2,2-Tetrachloroethane	50	U	2.3	50
Tetrachloroethene	50	U	3.0	50
Toluene	5.6	J	0.90	50
1,1,1-Trichloroethane	50	U	3.8	50
1,1,2-Trichloroethane	50	U	3.3	50
Trichloroethene	50	U	2.6	50
Vinyl chloride	50	U	3.0	50
Xylenes, Total	4000		4.6	50
cis-1,2-Dichloroethene	50	U	3.3	50
trans-1,2-Dichloroethene	50	U	2.2	50

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80	53 - 125
4-Bromofluorobenzene	102	73 - 127
Dibromofluoromethane	82	54 - 137
Toluene-d8 (Surr)	82	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: W-8D

Lab Sample ID: 220-4043-9

Client Matrix: Water

Date Sampled: 01/30/2008 0000

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13215

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4319.D

Dilution: 10

Initial Weight/Volume: 5 mL

Date Analyzed: 02/06/2008 1339

Final Weight/Volume: 5 mL

Date Prepared: 02/06/2008 1339

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	100	U	16	100
Benzene	50	U	2.3	50
Bromodichloromethane	50	U	2.4	50
Bromoform	50	U	12	50
Bromomethane	50	U	10	50
Methyl Ethyl Ketone	100	U	11	100
Carbon disulfide	50	U	1.4	50
Carbon tetrachloride	50	U	2.9	50
Chlorobenzene	50	U	1.5	50
Chloroethane	50	U	4.8	50
Chloroform	50	U	2.7	50
Chloromethane	50	U	2.4	50
Dibromochloromethane	50	U	2.1	50
1,1-Dichloroethane	50	U	2.3	50
1,2-Dichloroethane	50	U	2.5	50
1,1-Dichloroethene	50	U	2.5	50
1,2-Dichloropropane	50	U	3.2	50
cis-1,3-Dichloropropene	50	U	2.8	50
trans-1,3-Dichloropropene	50	U	2.8	50
Ethylbenzene	390		2.8	50
2-Hexanone	100	U	3.7	100
Methylene Chloride	3.8	J	2.6	50
methyl isobutyl ketone	100	U	3.8	100
Styrene	50	U	7.0	50
1,1,2,2-Tetrachloroethane	50	U	2.3	50
Tetrachloroethene	50	U	3.0	50
Toluene	5.4	J	0.90	50
1,1,1-Trichloroethane	50	U	3.8	50
1,1,2-Trichloroethane	50	U	3.3	50
Trichloroethene	50	U	2.6	50
Vinyl chloride	50	U	3.0	50
Xylenes, Total	4200		4.6	50
cis-1,2-Dichloroethene	50	U	3.3	50
trans-1,2-Dichloroethene	50	U	2.2	50
Surrogate	%Rec	Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	72	53 - 125		
4-Bromofluorobenzene	86	73 - 127		
Dibromofluoromethane	71	54 - 137		
Toluene-d8 (Surr)	69	63 - 121		

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1
Sdg Number: 220-4043

Client Sample ID: FB

Lab Sample ID: 220-4043-10

Client Matrix: Water

Date Sampled: 01/30/2008 0000

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13121

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4223.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 02/01/2008 2105

Final Weight/Volume: 5 mL

Date Prepared: 02/01/2008 2105

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	1.8	J	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	5.0	U	0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79	53 - 125
4-Bromofluorobenzene	103	73 - 127
Dibromofluoromethane	83	54 - 137
Toluene-d8 (Surr)	82	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-4043-11TB

Date Sampled: 01/30/2008 0000

Client Matrix: Water

Date Received: 02/01/2008 0951

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 220-13121

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L4224.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 02/01/2008 2129

Final Weight/Volume: 5 mL

Date Prepared: 02/01/2008 2129

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	0.33	J	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	5.0	U	0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	81	53 - 125
4-Bromofluorobenzene	104	73 - 127
Dibromofluoromethane	80	54 - 137
Toluene-d8 (Surr)	84	63 - 121

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	12DCE %Rec	TOL %Rec	BFB %Rec
220-4043-1	W-2	82	82	87	104
220-4043-2	W-2A	82	82	82	103
220-4043-3	W-3	82	80	83	105
220-4043-4	W-4	85	81	87	111
220-4043-5	W-5	71	69	75	96
220-4043-6	W-6	84	82	89	107
220-4043-7	W-7	84	80	83	107
220-4043-8	W-8	82	80	82	102
220-4043-9	W-8D	71	72	69	86
220-4043-10	FB	83	79	82	103
220-4043-11	TRIP BLANK	80	81	84	104
MB 220-13121/3		81	81	89	121
MB 220-13151/3		79	79	83	101
MB 220-13215/3		85	83	85	120
LCS 220-13121/2		82	81	83	101
LCS 220-13151/2		81	82	83	99
LCS 220-13215/2		91	91	85	108
MSB 220-13151/5		83	82	84	98
220-4043-6 MS	W-6 MS	85	87	84	102
220-4043-6 MSD	W-6 MSD	87	85	82	96

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	54-137
12DCE = 1,2-Dichloroethane-d4 (Surr)	53-125
TOL = Toluene-d8 (Surr)	63-121
BFB = 4-Bromofluorobenzene	73-127

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Method Blank - Batch: 220-13121

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 220-13121/3

Analysis Batch: 220-13121

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L4206.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 02/01/2008 1252

Final Weight/Volume: 5 mL

Date Prepared: 02/01/2008 1252

Analyte	Result	Qual	MDL	RL
Acetone	7.0	J	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	5.0	U	0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0
Surrogate	% Rec	Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	81	53 - 125		
4-Bromofluorobenzene	121	73 - 127		
Dibromofluoromethane	81	54 - 137		
Toluene-d8 (Surr)	89	63 - 121		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Lab Control Spike - Batch: 220-13121

Method: 8260B

Preparation: 5030B

Lab Sample ID: LCS 220-13121/2

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 02/01/2008 1138

Date Prepared: 02/01/2008 1138

Analysis Batch: 220-13121

Prep Batch: N/A

Units: ug/L

Instrument ID: HP 5890/5971 GC/MS

Lab File ID: L4203.D

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	45.8	229	18 - 263	B
Benzene	20.0	21.1	105	68 - 126	
Bromodichloromethane	20.0	21.3	106	67 - 118	
Bromoform	20.0	20.3	101	63 - 115	
Bromomethane	20.0	27.1	136	27 - 171	M
Methyl Ethyl Ketone	20.0	31.7	158	30 - 222	
Carbon disulfide	20.0	22.7	114	44 - 142	
Carbon tetrachloride	20.0	19.1	95	56 - 131	
Chlorobenzene	20.0	20.4	102	71 - 114	
Chloroethane	20.0	22.8	114	53 - 167	
Chloroform	20.0	22.5	112	70 - 124	
Chloromethane	20.0	21.6	108	43 - 134	
Dibromochloromethane	20.0	21.2	106	65 - 114	
1,1-Dichloroethane	20.0	21.0	105	67 - 121	
1,2-Dichloroethane	20.0	21.7	108	68 - 124	
1,1-Dichloroethene	20.0	23.9	119	57 - 137	
1,2-Dichloropropane	20.0	21.4	107	69 - 122	
cis-1,3-Dichloropropene	20.0	21.7	108	60 - 122	
trans-1,3-Dichloropropene	20.0	20.5	103	55 - 126	
Ethylbenzene	20.0	19.7	98	71 - 115	
2-Hexanone	20.0	32.1	160	54 - 179	
Methylene Chloride	20.0	21.3	106	61 - 129	
methyl isobutyl ketone	20.0	23.6	118	61 - 140	
Styrene	20.0	18.0	90	69 - 112	
1,1,2,2-Tetrachloroethane	20.0	16.9	84	66 - 129	
Tetrachloroethene	20.0	19.9	100	62 - 118	
Toluene	20.0	20.1	100	70 - 116	
1,1,1-Trichloroethane	20.0	22.1	111	60 - 128	
1,1,2-Trichloroethane	20.0	21.2	106	70 - 119	
Trichloroethene	20.0	23.7	119	58 - 125	
Vinyl chloride	20.0	20.2	101	51 - 139	
Xylenes, Total	60.0	58.3	97	66 - 118	
cis-1,2-Dichloroethene	20.0	21.2	106	65 - 120	
trans-1,2-Dichloroethene	20.0	20.5	103	57 - 129	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	81		53 - 125		
4-Bromofluorobenzene	101		73 - 127		
Dibromofluoromethane	82		54 - 137		
Toluene-d8 (Surr)	83		63 - 121		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Method Blank - Batch: 220-13151

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 220-13151/3

Analysis Batch: 220-13151

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L4237.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 02/04/2008 1037

Final Weight/Volume: 5 mL

Date Prepared: 02/04/2008 1037

Analyte	Result	Qual	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	5.0	U	0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	79	53 - 125
4-Bromofluorobenzene	101	73 - 127
Dibromofluoromethane	79	54 - 137
Toluene-d8 (Surr)	83	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Lab Control Spike - Batch: 220-13151

Method: 8260B

Preparation: 5030B

Lab Sample ID: LCS 220-13151/2

Analysis Batch: 220-13151

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L4235.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 02/04/2008 0948

Final Weight/Volume: 5 mL

Date Prepared: 02/04/2008 0948

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	36.0	180	18 - 263	
Benzene	20.0	20.9	105	68 - 126	
Bromodichloromethane	20.0	21.0	105	67 - 118	
Bromoform	20.0	20.0	100	63 - 115	
Bromomethane	20.0	22.4	112	27 - 171	M
Methyl Ethyl Ketone	20.0	27.8	139	30 - 222	
Carbon disulfide	20.0	20.9	105	44 - 142	
Carbon tetrachloride	20.0	21.4	107	56 - 131	
Chlorobenzene	20.0	18.8	94	71 - 114	
Chloroethane	20.0	21.4	107	53 - 167	
Chloroform	20.0	21.4	107	70 - 124	
Chloromethane	20.0	21.0	105	43 - 134	
Dibromochloromethane	20.0	19.8	99	65 - 114	
1,1-Dichloroethane	20.0	20.7	103	67 - 121	
1,2-Dichloroethane	20.0	21.3	107	68 - 124	
1,1-Dichloroethene	20.0	24.8	124	57 - 137	
1,2-Dichloropropane	20.0	21.4	107	69 - 122	
cis-1,3-Dichloropropene	20.0	21.2	106	60 - 122	
trans-1,3-Dichloropropene	20.0	20.8	104	55 - 126	
Ethylbenzene	20.0	18.3	92	71 - 115	
2-Hexanone	20.0	30.4	152	54 - 179	
Methylene Chloride	20.0	21.1	106	61 - 129	
methyl isobutyl ketone	20.0	22.6	113	61 - 140	
Styrene	20.0	17.1	86	69 - 112	
1,1,1,2-Tetrachloroethane	20.0	16.1	80	66 - 129	
Tetrachloroethene	20.0	18.8	94	62 - 118	
Toluene	20.0	19.7	98	70 - 116	
1,1,1-Trichloroethane	20.0	21.1	105	60 - 128	
1,1,2-Trichloroethane	20.0	21.1	106	70 - 119	
Trichloroethene	20.0	23.7	118	58 - 125	
Vinyl chloride	20.0	20.7	104	51 - 139	
Xylenes, Total	60.0	57.0	95	66 - 118	
cis-1,2-Dichloroethene	20.0	20.7	104	65 - 120	
trans-1,2-Dichloroethene	20.0	20.3	101	57 - 129	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	82		53 - 125		
4-Bromofluorobenzene	99		73 - 127		
Dibromofluoromethane	81		54 - 137		
Toluene-d8 (Surr)	83		63 - 121		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Matrix Spike Blank - Batch: 220-13151

Method: 8260B

Preparation: 5030B

Lab Sample ID: MSB 220-13151/5

Analysis Batch: 220-13151

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L4245.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 02/04/2008 1328

Final Weight/Volume: 5 mL

Date Prepared: 02/04/2008 1328

Analyte	Spike Amount	Result	% Rec.	Limit	Qual	
Acetone	50.0	37.5	75	18 - 263	M	
Benzene	50.0	46.5	93	68 - 126		
Bromodichloromethane	50.0	46.5	93	67 - 118		
Bromoform	50.0	42.4	85	63 - 115		
Bromomethane	50.0	67.5	135	27 - 171		
Methyl Ethyl Ketone	50.0	41.6	83	30 - 222		
Carbon disulfide	50.0	38.2	76	44 - 142		
Carbon tetrachloride	50.0	43.2	86	56 - 131		
Chlorobenzene	50.0	44.1	88	71 - 114		
Chloroethane	50.0	47.7	95	53 - 167		
Chloroform	50.0	48.1	96	70 - 124		
Chloromethane	50.0	47.4	95	43 - 134		
Dibromochloromethane	50.0	43.1	86	65 - 114		
1,1-Dichloroethane	50.0	47.7	95	67 - 121		
1,2-Dichloroethane	50.0	48.8	98	68 - 124		
1,1-Dichloroethene	50.0	45.1	90	57 - 137		
1,2-Dichloropropane	50.0	48.1	96	69 - 122		
cis-1,3-Dichloropropene	50.0	45.3	91	60 - 122		
trans-1,3-Dichloropropene	50.0	46.3	93	55 - 126		
Ethylbenzene	50.0	42.5	85	71 - 115		
2-Hexanone	50.0	49.3	99	54 - 179		
Methylene Chloride	50.0	49.0	98	61 - 129		
methyl isobutyl ketone	50.0	48.7	97	61 - 140		
Styrene	50.0	42.6	85	69 - 112		
1,1,2,2-Tetrachloroethane	50.0	40.7	81	66 - 129		
Tetrachloroethene	50.0	41.0	82	62 - 118		
Toluene	50.0	43.8	88	70 - 116		
1,1,1-Trichloroethane	50.0	46.4	93	60 - 128		
1,1,2-Trichloroethane	50.0	50.4	101	70 - 119		
Trichloroethene	50.0	51.2	102	58 - 125		
Vinyl chloride	50.0	47.6	95	51 - 139		
Xylenes, Total	150	126	84	66 - 118		
cis-1,2-Dichloroethene	50.0	48.2	96	65 - 120		
trans-1,2-Dichloroethene	50.0	45.4	91	57 - 129		
Surrogate	% Rec		Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	82		53 - 125			
4-Bromofluorobenzene	98		73 - 127			
Dibromofluoromethane	83		54 - 137			
Toluene-d8 (Surr)	84		63 - 121			

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 220-13151

Method: 8260B

Preparation: 5030B

MS Lab Sample ID: 220-4043-6
Client Matrix: Water
Dilution: 10
Date Analyzed: 02/04/2008 1613
Date Prepared: 02/04/2008 1613

Analysis Batch: 220-13151
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L4251.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-4043-6
Client Matrix: Water
Dilution: 10
Date Analyzed: 02/04/2008 1637
Date Prepared: 02/04/2008 1637

Analysis Batch: 220-13151
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L4252.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acetone	59	60	18 - 263	2	20		
Benzene	98	92	68 - 126	6	20		
Bromodichloromethane	103	94	67 - 118	9	20		
Bromoform	91	88	63 - 115	3	20		
Bromomethane	195	177	27 - 171	10	20	M *	M *
Methyl Ethyl Ketone	86	79	30 - 222	9	20		
Carbon disulfide	81	76	44 - 142	6	20		
Carbon tetrachloride	85	79	56 - 131	8	20		
Chlorobenzene	86	84	71 - 114	2	20		
Chloroethane	124	111	53 - 167	11	20		
Chloroform	101	95	70 - 124	6	20		
Chloromethane	122	113	43 - 134	7	20		M
Dibromochloromethane	94	89	65 - 114	5	20		
1,1-Dichloroethane	98	92	67 - 121	6	20		
1,2-Dichloroethane	105	100	68 - 124	4	20		
1,1-Dichloroethene	100	92	57 - 137	7	20		
1,2-Dichloropropane	103	94	69 - 122	9	20		
cis-1,3-Dichloropropene	101	95	60 - 122	6	20		
trans-1,3-Dichloropropene	106	99	55 - 126	7	20		
Ethylbenzene	86	80	71 - 115	7	20		
2-Hexanone	110	102	54 - 179	8	20		
Methylene Chloride	98	94	61 - 129	3	20		
methyl isobutyl ketone	107	100	61 - 140	6	20		
Styrene	87	82	69 - 112	6	20		
1,1,2,2-Tetrachloroethane	100	96	66 - 129	4	20		
Tetrachloroethene	84	80	62 - 118	4	20		
Toluene	87	83	70 - 116	4	20		
1,1,1-Trichloroethane	50	29	60 - 128	7	20	*	*
1,1,2-Trichloroethane	106	103	70 - 119	3	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 220-13151

Method: 8260B

Preparation: 5030B

MS Lab Sample ID: 220-4043-6
Client Matrix: Water
Dilution: 10
Date Analyzed: 02/04/2008 1613
Date Prepared: 02/04/2008 1613

Analysis Batch: 220-13151
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L4251.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-4043-6
Client Matrix: Water
Dilution: 10
Date Analyzed: 02/04/2008 1637
Date Prepared: 02/04/2008 1637

Analysis Batch: 220-13151
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L4252.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Trichloroethene	102	94	58 - 125	8	20		
Vinyl chloride	153	144	51 - 139	7	20	*	*
Xylenes, Total	85	80	66 - 118	7	20		
cis-1,2-Dichloroethene	100	94	65 - 120	6	20		
trans-1,2-Dichloroethene	93	87	57 - 129	6	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
1,2-Dichloroethane-d4 (Surr)	87		85	53 - 125			
4-Bromofluorobenzene	102		96	73 - 127			
Dibromofluoromethane	85		87	54 - 137			
Toluene-d8 (Surr)	84		82	63 - 121			

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Method Blank - Batch: 220-13215

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 220-13215/3

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 02/06/2008 1022

Date Prepared: 02/06/2008 1022

Analysis Batch: 220-13215

Prep Batch: N/A

Units: ug/L

Instrument ID: HP 5890/5971 GC/MS

Lab File ID: L4311.D

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	10	U	1.6	10
Benzene	5.0	U	0.23	5.0
Bromodichloromethane	5.0	U	0.24	5.0
Bromoform	5.0	U	1.2	5.0
Bromomethane	5.0	U	1.0	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.14	5.0
Carbon tetrachloride	5.0	U	0.29	5.0
Chlorobenzene	5.0	U	0.15	5.0
Chloroethane	5.0	U	0.48	5.0
Chloroform	5.0	U	0.27	5.0
Chloromethane	5.0	U	0.24	5.0
Dibromochloromethane	5.0	U	0.21	5.0
1,1-Dichloroethane	5.0	U	0.23	5.0
1,2-Dichloroethane	5.0	U	0.25	5.0
1,1-Dichloroethene	5.0	U	0.25	5.0
1,2-Dichloropropane	5.0	U	0.32	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.28	5.0
Ethylbenzene	5.0	U	0.28	5.0
2-Hexanone	10	U	0.37	10
Methylene Chloride	5.0	U	0.26	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.70	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.23	5.0
Tetrachloroethene	5.0	U	0.30	5.0
Toluene	5.0	U	0.090	5.0
1,1,1-Trichloroethane	5.0	U	0.38	5.0
1,1,2-Trichloroethane	5.0	U	0.33	5.0
Trichloroethene	5.0	U	0.26	5.0
Vinyl chloride	5.0	U	0.30	5.0
Xylenes, Total	5.0	U	0.46	5.0
cis-1,2-Dichloroethene	5.0	U	0.33	5.0
trans-1,2-Dichloroethene	5.0	U	0.22	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	83	53 - 125
4-Bromofluorobenzene	120	73 - 127
Dibromofluoromethane	85	54 - 137
Toluene-d8 (Surr)	85	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Lab Control Spike - Batch: 220-13215

Method: 8260B

Preparation: 5030B

Lab Sample ID: LCS 220-13215/2

Analysis Batch: 220-13215

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L4308.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 02/06/2008 0908

Final Weight/Volume: 5 mL

Date Prepared: 02/06/2008 0908

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	38.2	191	18 - 263	
Benzene	20.0	21.2	106	68 - 126	
Bromodichloromethane	20.0	21.3	107	67 - 118	
Bromoform	20.0	18.5	93	63 - 115	
Bromomethane	20.0	29.4	147	27 - 171	M
Methyl Ethyl Ketone	20.0	30.1	150	30 - 222	
Carbon disulfide	20.0	15.4	77	44 - 142	
Carbon tetrachloride	20.0	21.8	109	56 - 131	
Chlorobenzene	20.0	17.8	89	71 - 114	
Chloroethane	20.0	21.8	109	53 - 167	
Chloroform	20.0	21.9	110	70 - 124	
Chloromethane	20.0	19.8	99	43 - 134	
Dibromochloromethane	20.0	18.9	94	65 - 114	
1,1-Dichloroethane	20.0	21.0	105	67 - 121	
1,2-Dichloroethane	20.0	20.9	105	68 - 124	
1,1-Dichloroethene	20.0	22.8	114	57 - 137	
1,2-Dichloropropane	20.0	22.2	111	69 - 122	
cis-1,3-Dichloropropene	20.0	20.9	104	60 - 122	
trans-1,3-Dichloropropene	20.0	20.5	103	55 - 126	
Ethylbenzene	20.0	17.5	88	71 - 115	
2-Hexanone	20.0	28.1	140	54 - 179	
Methylene Chloride	20.0	21.2	106	61 - 129	
methyl isobutyl ketone	20.0	21.5	108	61 - 140	
Styrene	20.0	15.5	78	69 - 112	
1,1,2,2-Tetrachloroethane	20.0	19.1	95	66 - 129	
Tetrachloroethene	20.0	16.2	81	62 - 118	
Toluene	20.0	17.6	88	70 - 116	
1,1,1-Trichloroethane	20.0	21.6	108	60 - 128	
1,1,2-Trichloroethane	20.0	20.9	104	70 - 119	
Trichloroethene	20.0	22.1	110	58 - 125	
Vinyl chloride	20.0	19.5	97	51 - 139	
Xylenes, Total	60.0	52.0	87	66 - 118	
cis-1,2-Dichloroethene	20.0	20.6	103	65 - 120	
trans-1,2-Dichloroethene	20.0	19.5	98	57 - 129	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	91		53 - 125		
4-Bromofluorobenzene	108		73 - 127		
Dibromofluoromethane	91		54 - 137		
Toluene-d8 (Surr)	85		63 - 121		

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	M	Manual integrated compound.
	*	MS or MSD exceeds the control limits
	B	The analyte was found in an associated blank, as well as in the sample.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

Sdg Number: 220-4043

QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
GC/MS VOA					
Analysis Batch:220-13121					
CCVIS 220-13121/1	Continuing Calibration and ISTD		Water	8260B	
LCS 220-13121/2	Lab Control Spike	T	Water	8260B	
MB 220-13121/3	Method Blank	T	Water	8260B	
220-4043-1	W-2	T	Water	8260B	
220-4043-2	W-2A	T	Water	8260B	
220-4043-3	W-3	T	Water	8260B	
220-4043-4	W-4	T	Water	8260B	
220-4043-5	W-5	T	Water	8260B	
220-4043-10	FB	T	Water	8260B	
220-4043-11TB	TRIP BLANK	T	Water	8260B	
Analysis Batch:220-13151					
CCVIS 220-13151/1	Continuing Calibration and ISTD		Water	8260B	
LCS 220-13151/2	Lab Control Spike	T	Water	8260B	
MSB 220-13151/5	Matrix Spike Blank	T	Water	8260B	
MB 220-13151/3	Method Blank	T	Water	8260B	
220-4043-6	W-6	T	Water	8260B	
220-4043-6MS	Matrix Spike	T	Water	8260B	
220-4043-6MSD	Matrix Spike Duplicate	T	Water	8260B	
220-4043-7	W-7	T	Water	8260B	
Analysis Batch:220-13215					
CCVIS 220-13215/1	Continuing Calibration and ISTD		Water	8260B	
LCS 220-13215/2	Lab Control Spike	T	Water	8260B	
MB 220-13215/3	Method Blank	T	Water	8260B	
220-4043-8	W-8	T	Water	8260B	
220-4043-9	W-8D	T	Water	8260B	

Report Basis

=

T = Total

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

SDG: 220-4043

Laboratory Chronicle

Lab ID: 220-4043-1

Client ID: W-2

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-A-1		220-13121		02/01/2008 16:11	1	TAL CT	BK
A:8260B	220-4043-A-1		220-13121		02/01/2008 16:11	1	TAL CT	BK

Lab ID: 220-4043-2

Client ID: W-2A

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-A-2		220-13121		02/01/2008 16:36	1	TAL CT	BK
A:8260B	220-4043-A-2		220-13121		02/01/2008 16:36	1	TAL CT	BK

Lab ID: 220-4043-3

Client ID: W-3

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-A-3		220-13121		02/01/2008 17:01	1	TAL CT	BK
A:8260B	220-4043-A-3		220-13121		02/01/2008 17:01	1	TAL CT	BK

Lab ID: 220-4043-4

Client ID: W-4

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-A-4		220-13121		02/01/2008 17:24	1	TAL CT	BK
A:8260B	220-4043-A-4		220-13121		02/01/2008 17:24	1	TAL CT	BK

Lab ID: 220-4043-5

Client ID: W-5

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-A-5		220-13121		02/01/2008 17:48	1	TAL CT	BK
A:8260B	220-4043-A-5		220-13121		02/01/2008 17:48	1	TAL CT	BK

Lab ID: 220-4043-6

Client ID: W-6

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-C-6		220-13151		02/04/2008 13:03	10	TAL CT	BK
A:8260B	220-4043-C-6		220-13151		02/04/2008 13:03	10	TAL CT	BK

TestAmerica Connecticut

A = Analytical Method

P = Prep Method

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

SDG: 220-4043

Laboratory Chronicle

Lab ID: 220-4043-6 MS

Client ID: W-6

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-C-6 MS		220-13151		02/04/2008 16:13	10	TAL CT	BK
A:8260B	220-4043-C-6 MS		220-13151		02/04/2008 16:13	10	TAL CT	BK

Lab ID: 220-4043-6 MSD

Client ID: W-6

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-C-6 MSD		220-13151		02/04/2008 16:37	10	TAL CT	BK
A:8260B	220-4043-C-6 MSD		220-13151		02/04/2008 16:37	10	TAL CT	BK

Lab ID: 220-4043-7

Client ID: W-7

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-B-7		220-13151		02/04/2008 19:03	2	TAL CT	BK
A:8260B	220-4043-B-7		220-13151		02/04/2008 19:03	2	TAL CT	BK

Lab ID: 220-4043-8

Client ID: W-8

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-B-8		220-13215		02/06/2008 13:14	10	TAL CT	BK
A:8260B	220-4043-B-8		220-13215		02/06/2008 13:14	10	TAL CT	BK

Lab ID: 220-4043-9

Client ID: W-8D

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-A-9		220-13215		02/06/2008 13:39	10	TAL CT	BK
A:8260B	220-4043-A-9		220-13215		02/06/2008 13:39	10	TAL CT	BK

Lab ID: 220-4043-10

Client ID: FB

Sample Date/Time: 01/30/2008 00:00 Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-B-10		220-13121		02/01/2008 21:05	1	TAL CT	BK
A:8260B	220-4043-B-10		220-13121		02/01/2008 21:05	1	TAL CT	BK

Quality Control Results

Client: FPM Group Limited

Job Number: 220-4043-1

SDG: 220-4043

Laboratory Chronicle

Lab ID: 220-4043-11

Client ID: TRIP BLANK

Sample Date/Time: 01/30/2008 00:00

Received Date/Time: 02/01/2008 09:51

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-4043-A-11		220-13121		02/01/2008 21:29	1	TAL CT	BK
A:8260B	220-4043-A-11		220-13121		02/01/2008 21:29	1	TAL CT	BK

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 220-13121/3		220-13121		02/01/2008 12:52	1	TAL CT	BK
A:8260B	MB 220-13121/3		220-13121		02/01/2008 12:52	1	TAL CT	BK
P:5030B	MB 220-13151/3		220-13151		02/04/2008 10:37	1	TAL CT	BK
A:8260B	MB 220-13151/3		220-13151		02/04/2008 10:37	1	TAL CT	BK
P:5030B	MB 220-13215/3		220-13215		02/06/2008 10:22	1	TAL CT	BK
A:8260B	MB 220-13215/3		220-13215		02/06/2008 10:22	1	TAL CT	BK

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 220-13121/2		220-13121		02/01/2008 11:38	1	TAL CT	BK
A:8260B	LCS 220-13121/2		220-13121		02/01/2008 11:38	1	TAL CT	BK
P:5030B	LCS 220-13151/2		220-13151		02/04/2008 09:48	1	TAL CT	BK
A:8260B	LCS 220-13151/2		220-13151		02/04/2008 09:48	1	TAL CT	BK
P:5030B	LCS 220-13215/2		220-13215		02/06/2008 09:08	1	TAL CT	BK
A:8260B	LCS 220-13215/2		220-13215		02/06/2008 09:08	1	TAL CT	BK

Lab ID: MSB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MSB 220-13151/5		220-13151		02/04/2008 13:28	1	TAL CT	BK
A:8260B	MSB 220-13151/5		220-13151		02/04/2008 13:28	1	TAL CT	BK

Lab References:

TAL CT = TestAmerica Connecticut

ANALYTICAL REPORT

Job Number: 220-6922-1

SDG Number: 220-6922

Job Description: WIN-HOLT

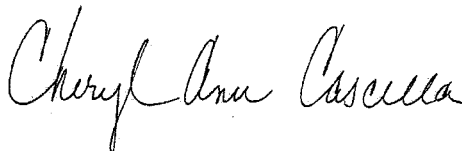
For:

FPM Group Limited

909 Marconi Avenue

Ronkonkoma, NY 11779

Attention: Mr. John Bukoski



Approved for release.
Cheryl Cascella
10/27/2008 2:23 PM

Designee for

Johanna Dubauskas

Project Manager I

johanna.dubauskas@testamericainc.com

10/27/2008

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

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TestAmerica Laboratories, Inc.

TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484

Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com



Case Narrative for Job: 220-6922-1

Client: FPM
Date: October 24, 2008

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



Lawrence Decker
Laboratory Director

October 24, 2008

Date

Job Narrative
220-J6922-1

Comments

No additional comments.

Receipt

Samples were received at the laboratory with no sample collection time documented on the chain of custody.

All other samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

$$\frac{(AX)(IS)(DF)}{(AIS)(RRF)(V)(\% \text{ solids})} = C$$

$$\frac{(AX)(IS)(VT)(1000)(DF)}{(AIS)(RRF)(VA)(V)(\% \text{ solids})} = C \quad (\text{for medium level soils})$$

SemiVolatiles

$$\frac{(AX)(IS)(VE)(DF)(\text{GPC factor is 2 if needed})}{(AIS)(RRF)(\text{volume injected})(V)(\% \text{ solids})} = C$$

Pesticides

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\% \text{ solids})(\text{volume injected})} = C$$

PCBs for compound/retention time

$$\frac{(AX)(VE)(DF)}{(\text{RRF of compound at the stated retention time})(V)(\% \text{ solids})(\text{volume injected})} = C$$

DRO/CTETPH

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\% \text{ solids})(\text{volume injected})} = C$$

AX = area of the target Ion

AIS = Area of Internal standard

C = concentration as ug/L or ug/Kg

DF = dilution

IS = Internal standard concentration (ng)

RRF = average RF (from initial cal except CLP methods from continuing cal)

V = sample volume for liquids in mls or sample weight for solids in grams

VA = volume of aliquot for medium level soils

VE = volume of concentrated extract

VT = volume of methanol for volatile medium level soils

SAMPLE SUMMARY

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-6922-1	W-2	Water	10/10/2008 0000	10/16/2008 0950
220-6922-2	W-2A	Water	10/10/2008 0000	10/16/2008 0950
220-6922-3	W-3	Water	10/10/2008 0000	10/16/2008 0950
220-6922-4	W-4	Water	10/10/2008 0000	10/16/2008 0950
220-6922-5	W-5	Water	10/10/2008 0000	10/16/2008 0950
220-6922-6	W-6	Water	10/10/2008 0000	10/16/2008 0950
220-6922-7	W-6E	Water	10/10/2008 0000	10/16/2008 0950
220-6922-8	W-7	Water	10/10/2008 0000	10/16/2008 0950
220-6922-9	W-8	Water	10/10/2008 0000	10/16/2008 0950
220-6922-10	W-8D	Water	10/10/2008 0000	10/16/2008 0950
220-6922-11TB	TRIP BLANK	Water	10/10/2008 0000	10/16/2008 0950

METHOD SUMMARY

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC/MS)	TAL CT	SW846 8260B	
Purge and Trap	TAL CT		SW846 5030B

Lab References:

TAL CT = TestAmerica Connecticut

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-2

Lab Sample ID: 220-6922-1

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0543.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0412

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0412

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U *	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	14		0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	53 - 125
4-Bromofluorobenzene	118	73 - 127
Dibromofluoromethane	105	54 - 137
Toluene-d8 (Surr)	99	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-2A

Lab Sample ID: 220-6922-2

Client Matrix: Water

Date Sampled: 10/10/2008 0000

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21263

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0578.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 1836

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 1836

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	53 - 125
4-Bromofluorobenzene	116	73 - 127
Dibromofluoromethane	101	54 - 137
Toluene-d8 (Surr)	101	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-3

Lab Sample ID: 220-6922-3

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0544.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0437

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0437

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U *	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	53 - 125
4-Bromofluorobenzene	114	73 - 127
Dibromofluoromethane	105	54 - 137
Toluene-d8 (Surr)	97	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Client Sample ID: W-4

Sdg Number: 220-6922

Lab Sample ID: 220-6922-4

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0545.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0500

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0500

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U*	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	8.6		0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	11		0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0
Surrogate	%Rec	Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	106	53 - 125		
4-Bromofluorobenzene	119	73 - 127		
Dibromofluoromethane	106	54 - 137		
Toluene-d8 (Surr)	96	63 - 121		

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-5

Lab Sample ID: 220-6922-5

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0546.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0524

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0524

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U *	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	50		0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	2.1	J	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90	53 - 125
4-Bromofluorobenzene	111	73 - 127
Dibromofluoromethane	97	54 - 137
Toluene-d8 (Surr)	98	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Client Sample ID: W-6

Sdg Number: 220-6922

Lab Sample ID: 220-6922-6

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch:	220-21263	Instrument ID:	HP 5890/5971 GC/MS
Preparation:	5030B			Lab File ID:	L0569.D
Dilution:	20			Initial Weight/Volume:	5 mL
Date Analyzed:	10/21/2008 1456			Final Weight/Volume:	5 mL
Date Prepared:	10/21/2008 1456				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	200	U	21	200
Benzene	100	U	15	100
Bromodichloromethane	100	U	9.6	100
Bromoform	100	U	9.2	100
Bromomethane	100	U	42	100
Methyl Ethyl Ketone	200	U	22	200
Carbon disulfide	100	U	18	100
Carbon tetrachloride	100	U	21	100
Chlorobenzene	100	U	14	100
Chloroethane	100	U	21	100
Chloroform	100	U	13	100
Chloromethane	100	U	22	100
Dibromochloromethane	100	U	11	100
1,1-Dichloroethane	36	J	21	100
1,2-Dichloroethane	100	U	14	100
1,1-Dichloroethene	31	J	17	100
1,2-Dichloropropane	100	U	14	100
cis-1,3-Dichloropropene	100	U	5.6	100
trans-1,3-Dichloropropene	100	U	11	100
Ethylbenzene	100	U	17	100
2-Hexanone	200	U	22	200
Methylene Chloride	19	J B	16	100
methyl isobutyl ketone	200	U	7.6	200
Styrene	100	U	13	100
1,1,2,2-Tetrachloroethane	100	U	16	100
Tetrachloroethene	100	U	16	100
Toluene	100	U	14	100
1,1,1-Trichloroethane	2000		14	100
1,1,2-Trichloroethane	100	U	13	100
Trichloroethene	100	U	12	100
Vinyl chloride	100	U	20	100
Xylenes, Total	100	U	45	100
cis-1,2-Dichloroethene	100	U	20	100
trans-1,2-Dichloroethene	100	U	15	100

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	53 - 125
4-Bromofluorobenzene	109	73 - 127
Dibromofluoromethane	105	54 - 137
Toluene-d8 (Surr)	102	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-6E

Lab Sample ID: 220-6922-7

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0548.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0614

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0614

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	4.9	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U *	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	53 - 125
4-Bromofluorobenzene	116	73 - 127
Dibromofluoromethane	104	54 - 137
Toluene-d8 (Surr)	96	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-7

Lab Sample ID: 220-6922-8

Client Matrix: Water

Date Sampled: 10/10/2008 0000

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0549.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0638

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0638

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U *	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	1.6	J	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	48		0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	1.4	J	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90	53 - 125
4-Bromofluorobenzene	120	73 - 127
Dibromofluoromethane	98	54 - 137
Toluene-d8 (Surr)	98	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-8

Lab Sample ID: 220-6922-9

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0550.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0703

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0703

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U *	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	53 - 125
4-Bromofluorobenzene	111	73 - 127
Dibromofluoromethane	103	54 - 137
Toluene-d8 (Surr)	94	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: W-8D

Lab Sample ID: 220-6922-10

Client Matrix: Water

Date Sampled: 10/10/2008 0000

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0551.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0727

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0727

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U*	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90	53 - 125
4-Bromofluorobenzene	111	73 - 127
Dibromofluoromethane	97	54 - 137
Toluene-d8 (Surr)	96	63 - 121

Analytical Data

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-6922-11TB

Date Sampled: 10/10/2008 0000

Client Matrix: Water

Date Received: 10/16/2008 0950

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Preparation: 5030B

Lab File ID: L0535.D

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0056

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0056

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U *	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	76	53 - 125
4-Bromofluorobenzene	98	73 - 127
Dibromofluoromethane	87	54 - 137
Toluene-d8 (Surr)	85	63 - 121

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	12DCE %Rec	TOL %Rec	BFB %Rec
220-6922-1	W-2	105	94	99	118
220-6922-2	W-2A	101	95	101	116
220-6922-3	W-3	105	99	97	114
220-6922-4	W-4	106	106	96	119
220-6922-5	W-5	97	90	98	111
220-6922-6	W-6	105	95	102	109
220-6922-7	W-6E	104	94	96	116
220-6922-8	W-7	98	90	98	120
220-6922-9	W-8	103	98	94	111
220-6922-10	W-8D	97	90	96	111
220-6922-11	TRIP BLANK	87	76	85	98
MB 220-21263/3		86	89	77	92
MB 220-21266/3		107	96	102	111
LCS 220-21263/2		107	104	95	92
LCS 220-21266/2		95	87	88	85
MSB 220-21266/5		101	92	96	84
220-6922-2 MS	W-2A MS	101	91	94	85
220-6922-2 MSD	W-2A MSD	100	90	95	84

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	54-137
12DCE = 1,2-Dichloroethane-d4 (Surr)	53-125
TOL = Toluene-d8 (Surr)	63-121
BFB = 4-Bromofluorobenzene	73-127

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Method Blank - Batch: 220-21263

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 220-21263/3

Analysis Batch: 220-21263

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L0566.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 1342

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 1342

Analyte	Result	Qual	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	0.91	J	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	53 - 125
4-Bromofluorobenzene	92	73 - 127
Dibromofluoromethane	86	54 - 137
Toluene-d8 (Surr)	77	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Lab Control Spike - Batch: 220-21263

Method: 8260B

Preparation: 5030B

Lab Sample ID: LCS 220-21263/2

Analysis Batch: 220-21263

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L0563.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 1228

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 1228

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	30.9	155	18 - 263	
Benzene	20.0	22.4	112	68 - 126	
Bromodichloromethane	20.0	21.5	107	67 - 118	
Bromoform	20.0	17.1	85	63 - 115	
Bromomethane	20.0	22.3	112	27 - 171	
Methyl Ethyl Ketone	20.0	26.3	131	30 - 222	
Carbon disulfide	20.0	17.3	86	44 - 142	
Carbon tetrachloride	20.0	22.1	110	56 - 131	
Chlorobenzene	20.0	19.4	97	71 - 114	
Chloroethane	20.0	19.8	99	53 - 167	
Chloroform	20.0	22.6	113	70 - 124	
Chloromethane	20.0	23.7	118	43 - 134	
Dibromochloromethane	20.0	18.8	94	65 - 114	
1,1-Dichloroethane	20.0	22.7	114	67 - 121	
1,2-Dichloroethane	20.0	22.2	111	68 - 124	
1,1-Dichloroethene	20.0	21.1	106	57 - 137	
1,2-Dichloropropane	20.0	22.3	111	69 - 122	
cis-1,3-Dichloropropene	20.0	21.0	105	60 - 122	
trans-1,3-Dichloropropene	20.0	20.7	104	55 - 126	
Ethylbenzene	20.0	19.8	99	71 - 115	
2-Hexanone	20.0	20.9	105	54 - 179	
Methylene Chloride	20.0	21.4	107	61 - 129	
methyl isobutyl ketone	20.0	21.5	107	61 - 140	
Styrene	20.0	18.1	90	69 - 112	
1,1,2,2-Tetrachloroethane	20.0	19.9	100	66 - 129	
Tetrachloroethene	20.0	19.4	97	62 - 118	
Toluene	20.0	20.3	101	70 - 116	
1,1,1-Trichloroethane	20.0	22.2	111	60 - 128	
1,1,2-Trichloroethane	20.0	21.4	107	70 - 119	
Trichloroethene	20.0	21.8	109	58 - 125	
Vinyl chloride	20.0	21.8	109	51 - 139	
Xylenes, Total	60.0	58.5	98	66 - 118	
cis-1,2-Dichloroethene	20.0	21.8	109	65 - 120	
trans-1,2-Dichloroethene	20.0	20.7	103	57 - 129	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	104		53 - 125		
4-Bromofluorobenzene	92		73 - 127		
Dibromofluoromethane	107		54 - 137		
Toluene-d8 (Surr)	95		63 - 121		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Method Blank - Batch: 220-21266

Method: 8260B

Preparation: 5030B

Lab Sample ID: MB 220-21266/3

Analysis Batch: 220-21266

Instrument ID: HP 5890/5971 GC/MS

Client Matrix: Water

Prep Batch: N/A

Lab File ID: L0534.D

Dilution: 1.0

Units: ug/L

Initial Weight/Volume: 5 mL

Date Analyzed: 10/21/2008 0031

Final Weight/Volume: 5 mL

Date Prepared: 10/21/2008 0031

Analyte	Result	Qual	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	53 - 125
4-Bromofluorobenzene	111	73 - 127
Dibromofluoromethane	107	54 - 137
Toluene-d8 (Surr)	102	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Lab Control Spike - Batch: 220-21266

Method: 8260B

Preparation: 5030B

Lab Sample ID: LCS 220-21266/2

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 10/20/2008 2302

Date Prepared: 10/20/2008 2302

Analysis Batch: 220-21266

Prep Batch: N/A

Units: ug/L

Instrument ID: HP 5890/5971 GC/MS

Lab File ID: L0531.D

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	19.9	99	18 - 263	
Benzene	20.0	23.1	115	68 - 126	
Bromodichloromethane	20.0	20.6	103	67 - 118	
Bromoform	20.0	16.9	84	63 - 115	
Bromomethane	20.0	19.5	98	27 - 171	
Methyl Ethyl Ketone	20.0	23.1	116	30 - 222	
Carbon disulfide	20.0	17.3	87	44 - 142	
Carbon tetrachloride	20.0	19.3	97	56 - 131	
Chlorobenzene	20.0	20.3	101	71 - 114	
Chloroethane	20.0	7.07	35	53 - 167	*
Chloroform	20.0	22.4	112	70 - 124	
Chloromethane	20.0	23.0	115	43 - 134	
Dibromochloromethane	20.0	18.4	92	65 - 114	
1,1-Dichloroethane	20.0	23.0	115	67 - 121	
1,2-Dichloroethane	20.0	20.2	101	68 - 124	
1,1-Dichloroethene	20.0	21.0	105	57 - 137	
1,2-Dichloropropane	20.0	22.4	112	69 - 122	
cis-1,3-Dichloropropene	20.0	20.7	104	60 - 122	
trans-1,3-Dichloropropene	20.0	19.5	98	55 - 126	
Ethylbenzene	20.0	21.4	107	71 - 115	
2-Hexanone	20.0	19.9	100	54 - 179	
Methylene Chloride	20.0	20.4	102	61 - 129	
methyl isobutyl ketone	20.0	21.2	106	61 - 140	
Styrene	20.0	18.2	91	69 - 112	
1,1,2,2-Tetrachloroethane	20.0	20.0	100	66 - 129	
Tetrachloroethene	20.0	20.5	102	62 - 118	
Toluene	20.0	21.6	108	70 - 116	
1,1,1-Trichloroethane	20.0	23.1	115	60 - 128	
1,1,2-Trichloroethane	20.0	20.4	102	70 - 119	
Trichloroethene	20.0	23.0	115	58 - 125	
Vinyl chloride	20.0	22.8	114	51 - 139	
Xylenes, Total	60.0	63.2	105	66 - 118	
cis-1,2-Dichloroethene	20.0	22.8	114	65 - 120	
trans-1,2-Dichloroethene	20.0	21.6	108	57 - 129	
Surrogate	% Rec		Acceptance Limits		
1,2-Dichloroethane-d4 (Surr)	87		53 - 125		
4-Bromofluorobenzene	85		73 - 127		
Dibromofluoromethane	95		54 - 137		
Toluene-d8 (Surr)	88		63 - 121		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Matrix Spike Blank - Batch: 220-21266

Method: 8260B

Preparation: 5030B

Lab Sample ID: MSB 220-21266/5

Client Matrix: Water

Dilution: 1.0

Date Analyzed: 10/21/2008 0234

Date Prepared: 10/21/2008 0234

Analysis Batch: 220-21266

Prep Batch: N/A

Units: ug/L

Instrument ID: HP 5890/5971 GC/MS

Lab File ID: L0539.D

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	50.0	51.4	103	18 - 263	
Benzene	50.0	57.7	115	68 - 126	
Bromodichloromethane	50.0	51.8	104	67 - 118	
Bromoform	50.0	40.8	82	63 - 115	
Bromomethane	50.0	40.4	81	27 - 171	
Methyl Ethyl Ketone	50.0	51.2	102	30 - 222	
Carbon disulfide	50.0	52.0	104	44 - 142	
Carbon tetrachloride	50.0	58.2	116	56 - 131	
Chlorobenzene	50.0	51.7	103	71 - 114	
Chloroethane	50.0	13.0	26	53 - 167	*
Chloroform	50.0	56.9	114	70 - 124	
Chloromethane	50.0	51.7	103	43 - 134	
Dibromochloromethane	50.0	43.5	87	65 - 114	
1,1-Dichloroethane	50.0	59.5	119	67 - 121	
1,2-Dichloroethane	50.0	49.1	98	68 - 124	
1,1-Dichloroethene	50.0	59.5	119	57 - 137	
1,2-Dichloropropane	50.0	54.8	110	69 - 122	
cis-1,3-Dichloropropene	50.0	52.6	105	60 - 122	
trans-1,3-Dichloropropene	50.0	49.0	98	55 - 126	
Ethylbenzene	50.0	54.4	109	71 - 115	
2-Hexanone	50.0	47.0	94	54 - 179	
Methylene Chloride	50.0	52.2	104	61 - 129	
methyl isobutyl ketone	50.0	45.1	90	61 - 140	
Styrene	50.0	50.8	102	69 - 112	
1,1,2,2-Tetrachloroethane	50.0	41.2	82	66 - 129	
Tetrachloroethene	50.0	53.6	107	62 - 118	
Toluene	50.0	54.6	109	70 - 116	
1,1,1-Trichloroethane	50.0	59.9	120	60 - 128	
1,1,2-Trichloroethane	50.0	47.3	95	70 - 119	
Trichloroethene	50.0	58.3	117	58 - 125	
Vinyl chloride	50.0	52.4	105	51 - 139	
Xylenes, Total	150	162	108	66 - 118	
cis-1,2-Dichloroethene	50.0	57.5	115	65 - 120	
trans-1,2-Dichloroethene	50.0	59.0	118	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92	53 - 125
4-Bromofluorobenzene	84	73 - 127
Dibromofluoromethane	101	54 - 137
Toluene-d8 (Surr)	96	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 220-21266

Method: 8260B

Preparation: 5030B

MS Lab Sample ID: 220-6922-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0259
Date Prepared: 10/21/2008 0259

Analysis Batch: 220-21266
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L0540.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-6922-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0323
Date Prepared: 10/21/2008 0323

Analysis Batch: 220-21266
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L0541.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acetone	94	101	18 - 263	7	20		
Benzene	110	107	68 - 126	2	20		
Bromodichloromethane	102	102	67 - 118	1	20		
Bromoform	84	81	63 - 115	4	20		
Bromomethane	82	79	27 - 171	4	20		
Methyl Ethyl Ketone	89	93	30 - 222	4	20		
Carbon disulfide	100	98	44 - 142	2	20		
Carbon tetrachloride	110	112	56 - 131	1	20		
Chlorobenzene	100	97	71 - 114	3	20		
Chloroethane	25	23	53 - 167	10	20	*	*
Chloroform	109	109	70 - 124	0	20		
Chloromethane	102	97	43 - 134	5	20		
Dibromochloromethane	89	87	65 - 114	2	20		
1,1-Dichloroethane	114	114	67 - 121	0	20		
1,2-Dichloroethane	101	99	68 - 124	2	20		
1,1-Dichloroethene	113	113	57 - 137	0	20		
1,2-Dichloropropane	106	107	69 - 122	1	20		
cis-1,3-Dichloropropene	101	101	60 - 122	0	20		
trans-1,3-Dichloropropene	96	96	55 - 126	1	20		
Ethylbenzene	103	103	71 - 115	0	20		
2-Hexanone	91	89	54 - 179	3	20		
Methylene Chloride	99	101	61 - 129	2	20		
methyl isobutyl ketone	91	86	61 - 140	5	20		
Styrene	100	97	69 - 112	4	20		
1,1,2,2-Tetrachloroethane	83	81	66 - 129	2	20		
Tetrachloroethene	106	102	62 - 118	4	20		
Toluene	103	103	70 - 116	0	20		
1,1,1-Trichloroethane	113	114	60 - 128	1	20		
1,1,2-Trichloroethane	98	97	70 - 119	1	20		
Trichloroethene	111	109	58 - 125	1	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-21266**

**Method: 8260B
Preparation: 5030B**

MS Lab Sample ID: 220-6922-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0259
Date Prepared: 10/21/2008 0259

Analysis Batch: 220-21266
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L0540.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-6922-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0323
Date Prepared: 10/21/2008 0323

Analysis Batch: 220-21266
Prep Batch: N/A

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L0541.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Vinyl chloride	102	98	51 - 139	3	20		
Xylenes, Total	103	99	66 - 118	5	20		
cis-1,2-Dichloroethene	110	111	65 - 120	1	20		
trans-1,2-Dichloroethene	112	112	57 - 129	0	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	90	53 - 125
4-Bromofluorobenzene	85	84	73 - 127
Dibromofluoromethane	101	100	54 - 137
Toluene-d8 (Surr)	94	95	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Matrix Spike/

Matrix Spike Duplicate Data Report - Batch: 220-21266

Method: 8260B

Preparation: 5030B

MS Lab Sample ID: 220-6922-2
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 10/21/2008 0259
 Date Prepared: 10/21/2008 0259

Units: ug/L

MSD Lab Sample ID: 220-6922-2
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 10/21/2008 0323
 Date Prepared: 10/21/2008 0323

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	10	U	50.0	50.0	47.1	50.5
Benzene	5.0	U	50.0	50.0	55.0	53.7
Bromodichloromethane	5.0	U	50.0	50.0	50.8	51.1
Bromoform	5.0	U	50.0	50.0	42.1	40.4
Bromomethane	5.0	U	50.0	50.0	40.9	39.4
Methyl Ethyl Ketone	10	U	50.0	50.0	44.5	46.5
Carbon disulfide	5.0	U	50.0	50.0	49.8	49.0
Carbon tetrachloride	5.0	U	50.0	50.0	55.2	55.9
Chlorobenzene	5.0	U	50.0	50.0	49.8	48.3
Chloroethane	5.0	U	50.0	50.0	12.5	11.3
Chloroform	5.0	U	50.0	50.0	54.6	54.7
Chloromethane	5.0	U	50.0	50.0	51.1	48.5
Dibromochloromethane	5.0	U	50.0	50.0	44.4	43.4
1,1-Dichloroethane	5.0	U	50.0	50.0	57.0	56.9
1,2-Dichloroethane	5.0	U	50.0	50.0	50.6	49.6
1,1-Dichloroethene	5.0	U	50.0	50.0	56.4	56.7
1,2-Dichloropropane	5.0	U	50.0	50.0	53.1	53.7
cis-1,3-Dichloropropene	5.0	U	50.0	50.0	50.5	50.5
trans-1,3-Dichloropropene	5.0	U	50.0	50.0	48.2	47.8
Ethylbenzene	5.0	U	50.0	50.0	51.3	51.4
2-Hexanone	10	U	50.0	50.0	45.6	44.3
Methylene Chloride	5.0	U	50.0	50.0	49.6	50.3
methyl isobutyl ketone	10	U	50.0	50.0	45.4	43.1
Styrene	5.0	U	50.0	50.0	50.0	48.3
1,1,2,2-Tetrachloroethane	5.0	U	50.0	50.0	41.3	40.5
Tetrachloroethene	5.0	U	50.0	50.0	52.9	50.9
Toluene	5.0	U	50.0	50.0	51.6	51.5
1,1,1-Trichloroethane	5.0	U	50.0	50.0	56.4	57.0
1,1,2-Trichloroethane	5.0	U	50.0	50.0	48.8	48.4
Trichloroethene	5.0	U	50.0	50.0	55.3	54.7
Vinyl chloride	5.0	U	50.0	50.0	50.8	49.2
Xylenes, Total	5.0	U	150	150	155	148
cis-1,2-Dichloroethene	5.0	U	50.0	50.0	55.0	55.4
trans-1,2-Dichloroethene	5.0	U	50.0	50.0	55.9	56.1

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	*	MS or MSD exceeds the control limits
	B	The analyte was found in an associated blank, as well as in the sample.

Quality Control Results

Client: FPM Group Limited

Job Number: 220-6922-1

Sdg Number: 220-6922

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-21263					
LCS 220-21263/2	Lab Control Spike	T	Water	8260B	
MB 220-21263/3	Method Blank	T	Water	8260B	
220-6922-2	W-2A	T	Water	8260B	
220-6922-6	W-6	T	Water	8260B	
Analysis Batch:220-21266					
LCS 220-21266/2	Lab Control Spike	T	Water	8260B	
MSB 220-21266/5	Matrix Spike Blank	T	Water	8260B	
MB 220-21266/3	Method Blank	T	Water	8260B	
220-6922-1	W-2	T	Water	8260B	
220-6922-2MS	Matrix Spike	T	Water	8260B	
220-6922-2MSD	Matrix Spike Duplicate	T	Water	8260B	
220-6922-3	W-3	T	Water	8260B	
220-6922-4	W-4	T	Water	8260B	
220-6922-5	W-5	T	Water	8260B	
220-6922-7	W-6E	T	Water	8260B	
220-6922-8	W-7	T	Water	8260B	
220-6922-9	W-8	T	Water	8260B	
220-6922-10	W-8D	T	Water	8260B	
220-6922-11TB	TRIP BLANK	T	Water	8260B	

Report Basis

T = Total

APPENDIX E

HRC CALCULATIONS



HRC Design Software for Barrier Treatment

Regenesi s Technical Support: USA (949) 366-8000, www.regenesi s.com

Site Name:

Location:

Consultant:

Site Conceptual Model/Extent of Plume Requiring Remediation

Length of Barrier (intersecting gw flow direction)

Depth to contaminated zone

Thickness of contaminated saturated zone

Aquifer soil type

Effective porosity

Hydraulic conductivity

Hydraulic gradient

Seepage velocity

130	ft		
24	ft		
15	ft		
sand			
0.25			
25	ft/day	=	8.8E-03
0.0015	ft/ft		
54.8	ft/yr	=	0.150

Dissolved Phase Electron Donor Demand

Tetrachloroethene (PCE)

Trichloroethene (TCE)

cis-1,2-dichloroethene (DCE)

Vinyl Chloride (VC)

Carbon tetrachloride

Chloroform

1,1,1-Trichloroethane (TCA)

1,1-Dichlorochloroethane (DCA)

Hexavalent Chromium

User added, also add stoichiometric demand

User added, also add stoichiometric demand

Contaminant Loading		Stoich. (wt/wt)	
Conc (mg/L)	Mass (lb)	contam/H ₂	
0.00	0.00	20.7	
0.01	0.02	21.9	
0.00	0.00	24.2	
0.00	0.00	31.2	
0.00	0.00	19.2	
0.00	0.00	19.9	
1.00	1.66	22.2	
0.02	0.03	24.7	
0.00	0.00	17.3	
0.00	0.00	0.0	
0.00	0.00	0.0	

Competing Electron Acceptors:

Oxygen

Nitrate

Est. Mn reduction demand (potential amt of Mn²⁺ formed)

Est. Fe reduction demand (potential amt of Fe²⁺ formed)

Estimated sulfate reduction demand

Electron Acceptor Loading		Stoich. (wt/wt)	
Conc (mg/L)	Mass (lb)	contam/H ₂	
5.00	8.32	8.0	
5.00	8.32	12.4	
5.00	8.32	27.5	
25.00	41.62	55.9	
100.00	166.49	12.0	

Microbial Demand Factor

Safety Factor

Lifespan for one application

2	Recommend 1-4x
2	Recommend 1-4x
1	Year(s)

Injection Spacing and Dose:

Number of rows in barrier

Spacing within rows

Effective spacing perpendicular to flow (ft)

Total number of HRC injection locations

Minimum required HRC dose per foot (lb/ft)

2	rows
20	ft on center spacing within rows
10.0	
13	points
7.8	

Project Summary

Number of HRC delivery points (adjust as nec. for site)	13
HRC Dose in lb/foot (adjust as nec. for site)	7.8
Corresponding amount of HRC per point (lb)	117
Number of 30 lb HRC Buckets per injection point	3.9
Total Number of 30 lb Buckets	51
Total Amt of HRC (lb)	1,530
HRC Cost	\$ 7.00
Total Material Cost	\$ 10,710
Shipping and Tax Estimates in US Dollars	
Sales Tax	rate: 0% \$ -
Total Matl. Cost w/Tax	\$ 10,710
Shipping of HRC (call for amount)	\$ -
Total Regenesi s Material Cost	\$ 10,710