



February 19, 2024

Mr. Binyoti Amungwafor
Wisconsin Department of Natural Resources
Milwaukee Service Center
1027 W. St. Paul Avenue
Milwaukee, WI 53233

**Re: Additional Site Investigation Work and DERF Change Order Request
OHM-Wauwatosa
6737 Milwaukee Avenue
Wauwatosa, Wisconsin 53213
BRRTS# 02-41-551923**

Dear Mr. Amungwafor:

You have requested additional vapor investigations for the above property in your email dated December 13, 2023 (a copy of which is attached). It is our understanding that the Wisconsin Department of Natural Resources (WDNR) is concerned that variations in the concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) detected in some soil gas probes and sub-slab samples may be the result of re-bound following site remedial actions. Of key concern is the increase of PCE and/or TCE seen in soil gas probes SG-6 and SG-7 which are located nearest to the adjacent residential home to the east.

The remedial action included soil vapor extraction (SVE) which was completed (SVE system shut down) in November of 2021 due to diminished yields of chlorinated hydrocarbons. Two (2) post-remedial vapor sampling events performed in 2023 have shown that the concentrations of PCE and/or TCE have been dramatically reduced over pre-remedial concentrations, with all concentrations below both the small commercial vapor risk screening levels (VRSLs) and residential VRSLs (refer to attached **Figure 1**). However, there have been slight increases in PCE and/or TCE seen in some of the vapor monitoring ports which have caused the WDNR to suspect that post-remedial rebound of the vapor contaminants is occurring. It is possible that the slight increases in concentrations of PCE and/or TCE during the second sampling event is due to seasonal and sampling condition variations inherent to the dynamic nature of soil gas. A third sampling event would provide an additional data point to further assess and evaluate the nature of these variations.

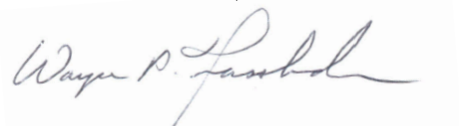
EnviroForensics, LLC proposes to re-sample soil gas probes SG-4s, SG-6s, SG-6d, SG-7s, and SG-7d one (1) additional time in the summer months for chlorinated volatile organic compounds (CVOCs) to determine if there is a statistically significant increasing trend in vapor concentrations. We do not propose to re-sample the sub-slab ports located within the site building due to the very low concentrations of CVOCs detected which are well below the small commercial VRSLs and the residential VRSLs.

Since this project is in the DERF program, we will need a change order in the amount of \$10,722.10 (see attached detailed cost estimate). We are also sending an updated DERF Form 4400-214D in Microsoft Excel spreadsheet form.

Please provide your approval of our proposed monitoring effort and DERF change order request.

If you have further questions regarding the proposed work or cost estimate, please contact me at (262) 490-6472, or by email at wfassbender@enviroforensics.com.

Sincerely,
EnviroForensics, LLC

A handwritten signature in black ink that reads "Wayne P. Fassbender".

Wayne Fassbender, PG
Senior Project Manager

Attachments:

Figure 1: Vapor Sampling Results
Detailed Cost Breakdown Sheet
Form 4400-214D as a separate Microsoft Excel spreadsheet

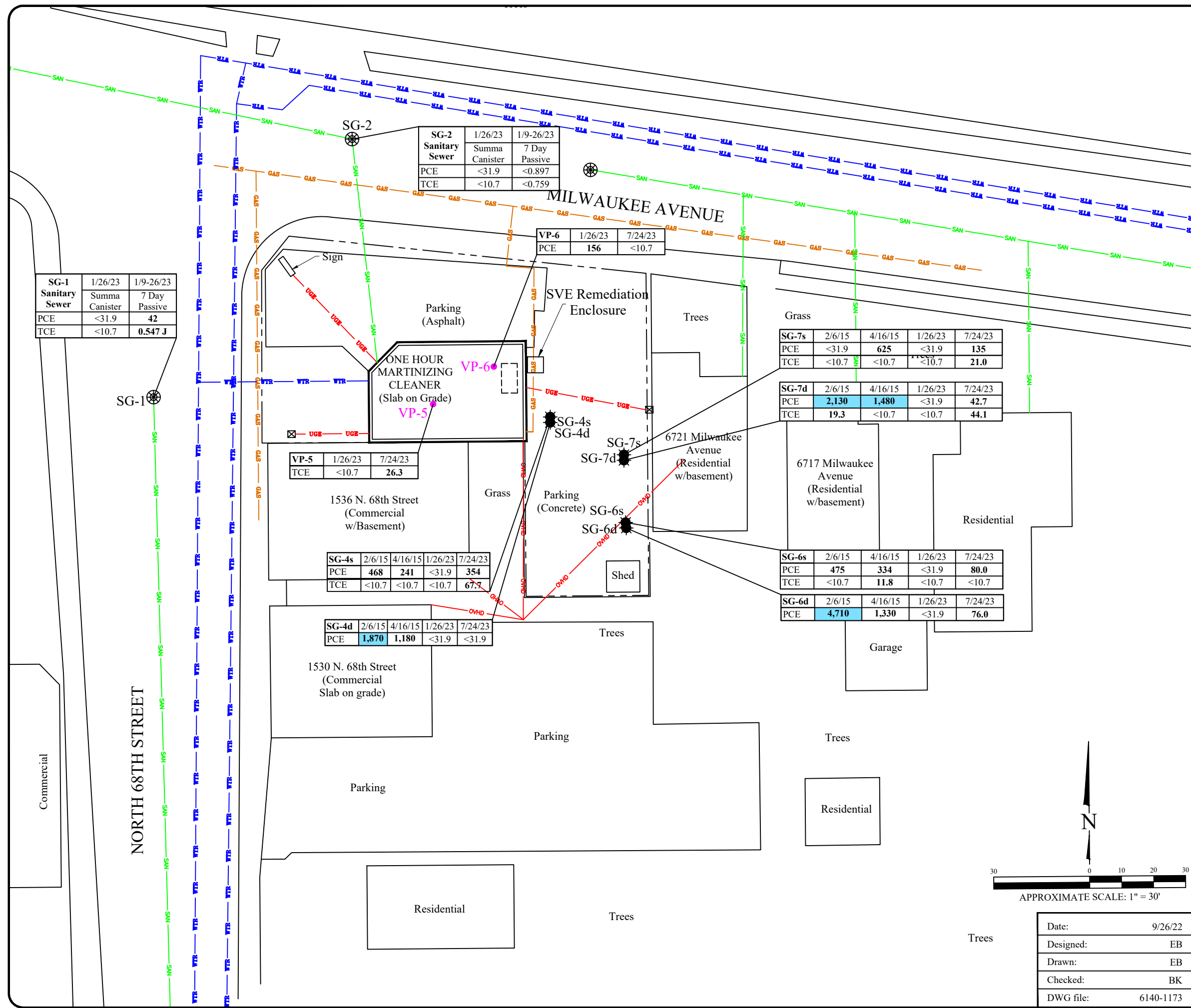
cc: Brian Cass, OHM Holdings, Inc.
Collin Martin, Ash Union, LLC

Legend

- Property boundary
- UGE Underground electric line utility
- OVHD Overhead electric line utility
- GAS Gas line utility
- SAN Sanitary line utility
- WTR Water line utility
- Old light location
- SG-1 Soil gas sample location
- VP-1 Sub-Slab vapor monitoring points
- SG-1 Sewer vapor sampling location

Analytes	Vapor Risk Screening Levels	
	Residential	Small Commercial
PCE	1,400	5,800
TCE	70	290

- Notes:
- Bolded and shaded blue values are above the residential vapor risk screening level
 - Units in micrograms per cubic meter = ug/m³
 - NE = Not Established
 - PCE = Tetachloroethene
 - TCE = Trichloroethene
 - CVOCs = Chlorinated Volatile Organic Compounds
 - ND = Not Detected



SG-1 Sanitary Sewer	1/26/23	1/9-26/23
Summa Canister	7 Day	Passive
PCE	<31.9	42
TCE	<10.7	0.547 J

SG-2 Sanitary Sewer	1/26/23	1/9-26/23
Summa Canister	7 Day	Passive
PCE	<31.9	<0.897
TCE	<10.7	<0.759

VP-6	1/26/23	7/24/23
PCE	156	<10.7

VP-5	1/26/23	7/24/23
TCE	<10.7	26.3

SG-4s	2/6/15	4/16/15	1/26/23	7/24/23
PCE	468	241	<31.9	354
TCE	<10.7	<10.7	<10.7	67.7

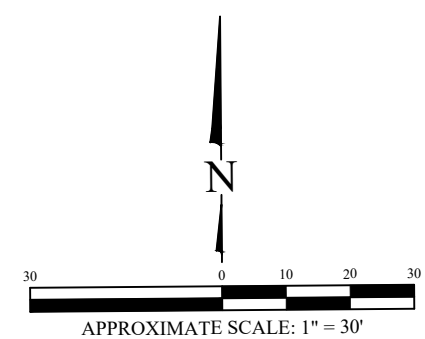
SG-4d	2/6/15	4/16/15	1/26/23	7/24/23
PCE	1,870	1,180	<31.9	<31.9

SG-7s	2/6/15	4/16/15	1/26/23	7/24/23
PCE	<31.9	625	<31.9	135
TCE	<10.7	<10.7	<10.7	21.0

SG-7d	2/6/15	4/16/15	1/26/23	7/24/23
PCE	2,130	1,480	<31.9	42.7
TCE	19.3	<10.7	<10.7	44.1

SG-6s	2/6/15	4/16/15	1/26/23	7/24/23
PCE	475	334	<31.9	80.0
TCE	<10.7	11.8	<10.7	<10.7

SG-6d	2/6/15	4/16/15	1/26/23	7/24/23
PCE	4,710	1,330	<31.9	76.0



VAPOR SAMPLING RESULTS

One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

 825 North Capitol Avenue • Indianapolis, IN 46204 EnviroForensics.com	Figure
	1
Project 6140	Date: 9/26/22 Designed: EB Drawn: EB Checked: BK DWG file: 6140-1173

Project Title:
Project Number/Name:
Date:

OHM Wauwatosa Repeat VI Sampling
6140
2/19/2024



C800--Repeat Soil Gas Sampling (includes work scoping, reporting, and project management)									
							Subtotal	Task Total	
Labor - Field									
Director / Vice President	\$ 245.00	hr					\$0.00		
Sr Project Manager	\$ 200.00	hr					\$0.00		
Sr Professional	\$ 200.00	hr					\$0.00		
Sr Engineer	\$ 200.00	hr					\$0.00		
Sr Geologist	\$ 200.00	hr					\$0.00		
Project Manager	\$ 165.00	hr					\$0.00		
Project Professional	\$ 165.00	hr					\$0.00		
Project Engineer	\$ 165.00	hr					\$0.00		
Project Geologist	\$ 165.00	hr					\$0.00		
Staff Professional II	\$ 140.00	hr					\$0.00		
Staff Professional I	\$ 135.00	hr					\$0.00		
Field Professional II	\$ 120.00	hr	12.0				\$1,440.00		
Field Professional I	\$ 115.00	hr					\$0.00		
Field Technician	\$ 110.00	hr					\$0.00		
							\$1,440.00		\$1,440.00
Labor - Office/Reporting									
Director / Vice President	\$ 245.00	hr					\$0.00		
Sr Project Manager	\$ 200.00	hr	24.0				\$4,800.00		
Sr Professional	\$ 200.00	hr					\$0.00		
Sr Engineer	\$ 200.00	hr					\$0.00		
Sr Geologist	\$ 200.00	hr					\$0.00		
Project Manager	\$ 165.00	hr	12.0				\$1,980.00		
Project Professional	\$ 165.00	hr					\$0.00		
Project Engineer	\$ 165.00	hr					\$0.00		
Project Geologist	\$ 165.00	hr					\$0.00		
Staff Professional	\$ 140.00	hr					\$0.00		
Field Professional	\$ 120.00	hr	4.0				\$480.00		
Drafting	\$ 110.00	hr	1.0				\$110.00		
Admin	\$ 80.00	hr					\$0.00		
Field Technician	\$ 110.00	hr					\$0.00		
							\$7,370.00		\$7,370.00
Contractors/Consultants									
Utility Locate		LS		1.15			\$0.00		
Driller		LS		1.15			\$0.00		
Surveyor		LS		1.15			\$0.00		
Waste Disposal		LS		1.15			\$0.00		
Historical Database Report		LS		1.15			\$0.00		
Remediation		LS		1.15			\$0.00		
				1.15			\$0.00		
				1.15			\$0.00		
				1.15			\$0.00		
				1.15			\$0.00		
							\$0.00	\$0.00	
Contractor/Consultant - Laboratory									
Soil VOC 8260 dry wt	\$ 83.50	ea		1.15			\$0.00		
Soil VOC 8260 dry wt QA/QC	\$ 83.50	ea		1.15			\$0.00		
GW VOC 8260	\$ 70.00	ea		1.15			\$0.00		
GW VOC 8260 QA/QC	\$ 70.00	ea		1.15			\$0.00		
Air TO-15 - Soil Gas	\$ 200.00	ea	5.0	1.15			\$1,150.00		
Air TO-15 - Sub-Slab	\$ 200.00	ea		1.15			\$0.00		
Air TO-15 - Indoor Air	\$ 200.00	ea		1.15			\$0.00		
Air - Individual Certification	\$ 50.00	ea		1.15			\$0.00		
Air - Batch Certification	\$ 50.00	LS	1.0	1.15			\$57.50		
Trip Blank VOCs 8260	\$ 70.00	ea		1.15			\$0.00		
Level IV QA/QC (15%)							\$0.00		
							\$1,207.50		\$1,207.50
Direct Costs - Expenses									
Hotel	\$ 160.00	day		1.15			\$0.00		
Meals	\$ 79.00	LS		1.15			\$0.00		
Misc Materials		LS		1.15			\$0.00		
Equipment Rental		LS		1.15			\$0.00		
							\$0.00		
							\$0.00		
							\$0.00		
							\$0.00		
							\$0.00		
							\$0.00		
							\$0.00	\$0.00	

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal
Vehicles	Field Vehicle - Full Day	\$ 30.00		\$ 155.00	1	\$ 620.00		\$ 155.00
	Support Vehicle - Full Day	\$ 40.00		\$ 210.00		\$ 840.00		\$ -
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	\$ 0.625						\$ -
Meters	Air Velocity Meter (per use)			\$ 50.00				\$ -
	Dissolved Oxygen Meter			\$ 40.00				\$ -
	Elec. Well Sounder (Probe)			\$ 35.00				\$ -
	FID Foxboro/Sensidyne (TIP)			\$ 250.00				\$ -
	Flow Calibrator			\$ 35.00				\$ -
	Flow Cell			\$ 150.00				\$ -
	Inline Ozone Meter			\$ 250.00				\$ -
	Manometers	\$ 115.00						\$ -
	Methane Meter			\$ 310.00				\$ -
	Multi-meter: Conductivity / pH / Temp / Turbidity			\$ 185.00				\$ -
	Multi-meter: Electrical (volt / ohm / amp)			\$ 35.00				\$ -
	O2 Meter			\$ 50.00		\$ 200.00		\$ -
	Oil/Water Interface Probe			\$ 115.00				\$ -
	ORP Meter			\$ 35.00				\$ -
	Ozone Leak Detector			\$ 150.00				\$ -
	PID or S80 OVM			\$ 160.00				\$ -
	ppb RAE			\$ 195.00				\$ -
Transducer (ea)			\$ 160.00				\$ -	
Transducer with Data Logger			\$ 210.00		\$ 840.00		\$ -	
Turbidity Meter			\$ 50.00				\$ -	
Pumps	Air Pump - Low Flow (Barcad)			\$ 30.00				\$ -
	Development Pump			\$ 145.00				\$ -
	Electric Submersible Pump with Control Box (Units)			\$ 220.00				\$ -
	Low-Flow Sampling Bladder	\$ 17.00						\$ -
	Peristaltic Pump			\$ 105.00	1			\$ 105.00
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	\$ 110.00						\$ -
	Portable SVE Unit - 1.5 HP			\$ 165.00		\$ 660.00		\$ -
	Intrinsically Safe Vapor Evacuation Blower			\$ 130.00				\$ -
	Transfer Pump			\$ 75.00		\$ 300.00		\$ -
	Pneumatic Low-Flow Pump - 1" Well			\$ 90.00				\$ -
Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			\$ 520.00				\$ -	
Power Tools	Air Compressor			\$ 50.00		\$ 200.00		\$ -
	Backpack Blower			\$ 80.00		\$ 320.00		\$ -
	Band Saw			\$ 50.00		\$ 200.00		\$ -
	Chain Saw			\$ 60.00		\$ 240.00		\$ -
	Coring Machine			\$ 210.00				\$ -
	Drum Vacuum			\$ 75.00		\$ 300.00		\$ -
	Generator			\$ 145.00				\$ -
	Hand Drill			\$ 80.00				\$ -
	Metal Detector			\$ 50.00				\$ -
	Methane Mitigation Fan	\$ 200.00		\$ 650.00				\$ -
	Portable Heater (70,000 BTU)			\$ 55.00		\$ 220.00		\$ -
	Rotary Hammer Drill			\$ 180.00				\$ -
	Steam Cleaner			\$ 140.00				\$ -
	Trimmer			\$ 60.00				\$ -
Sampling	1L Tedlar Bag	\$ 22.00						\$ -
	Asbestos Investigation Supplies			\$ 145.00				\$ -
	Asbestos Sampling Core	\$ 3.50						\$ -
	Asbestos Sampling Kit			\$ 260.00				\$ -
	Bailers (Disposable)	\$ 12.00						\$ -
	Bailers (Non-Disposable)			\$ 15.00				\$ -
	Core Boxes	\$ 15.00						\$ -
	Core Sampler			\$ 60.00				\$ -
	Filter - Large	\$ 25.00						\$ -
	Filter - Small	\$ 12.00						\$ -
	PFA Tubing - 1/2-inch ID	\$ 7.95						\$ -
	Sample Kit - NAPL	\$ 55.00						\$ -
	Sample Kit - Radon	\$ 35.00						\$ -
	Test Kit - Dissolved Oxygen	\$ 10.00						\$ -
	Test Kit - Hydrogen Sulfide	\$ 10.00						\$ -
	Test Kit - Iron	\$ 10.00						\$ -
	Tubing - Polyethylene: 1/4" OD (per foot)	\$ 1.95						\$ -
	Tubing - Polyethylene: 1/2" OD (per foot)	\$ 3.60						\$ -
Tubing - Master Flex: 3/8" STD (per foot)	\$ 6.90	8					\$ 55.20	
Tubing (Bonded) - Polyethylene (Teflon): 1/16" OD X 1/4" OD (per foot)	\$ 3.90						\$ -	
Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	\$ 3.80						\$ -	
Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	\$ 1.50						\$ -	
Systems	De-scaler			\$ 120.00				\$ -
	Ozone Air Filter Holder			\$ 20.00				\$ -
	P/T Plugs	\$ 8.00						\$ -
	SVE Blower Grease (tube)			\$ 25.00				\$ -
	SVE Blower Oil (quart)			\$ 35.00				\$ -
	SVE Dilution Air Filter			\$ 35.00				\$ -
	SVE Inlet Air Filter			\$ 85.00				\$ -
	System Wiring (per foot)	\$ 0.70						\$ -
	VMS Diagnostic Testing Package	\$ 400.00						\$ -
VMS Installation Package			\$ 500.00		\$ 2,000.00		\$ -	
Vapor	Helium QA/QC Accessories	\$ 35.00	1					\$ 35.00
	Helium QA/QC Kit			\$ 290.00	1			\$ 290.00
	Soil Gas Screen: 12-inch	\$ 65.00						\$ -
	Soil Gas Screen: 6-inch	\$ 45.00						\$ -
	Temporary Sampling Port	\$ 30.00						\$ -
	Vapor Pin Sub-Slab Cover (Stainless Steel)	\$ 50.00						\$ -
	Vapor Pin Sub-Slab Sampling Port	\$ 95.00						\$ -
Other	325 gal poly tank			\$ 35.00				\$ -
	550 gal poly tank			\$ 45.00				\$ -
	55-Gallon Drum	\$ 100.00						\$ -
	Absorbent Boom 5X10 ft	\$ 45.00						\$ -
	Bertronic			\$ 15.00				\$ -
	Concrete Mixing Package			\$ 85.00				\$ -
	Hard Auger			\$ 55.00				\$ -
	Manual Drive Point Kit	\$ 95.00						\$ -
	Measuring Wheel			\$ 15.00				\$ -
	Padlocks	\$ 15.00						\$ -
	Surveying Equipment (Transit & Rod)			\$ 80.00		\$ 320.00		\$ -
	Video Inspection Tool			\$ 50.00				\$ -
	Well abandonment kit	\$ 30.00						\$ -
	Well Caps	\$ 35.00						\$ -
Well Cover 8X12"	\$ 120.00						\$ -	
Safety	Fall Protection			\$ 25.00				\$ -
	Gloves (Chemical Resistant)	\$ 25.00						\$ -
	Nitrile Sampling Gloves (Disposable)	\$ 0.22	20					\$ 4.40
	Level "B": Level "C1" plus SCBA			\$ 230.00				\$ -
	Level "C1": Level "C2" plus Polycoat Suit			\$ 105.00				\$ -
	Level "C2": Level "D" plus Respirator			\$ 55.00				\$ -
Production	Standby SCBA			\$ 140.00				\$ -
	Routine Field and Safety Equipment			\$ 60.00	1			\$ 60.00
	Color Copies	\$ 0.40						\$ -
	B/W Copies	\$ 0.25						\$ -
Report CD Copy	\$ 5.00						\$ -	
PHASE TOTAL								\$ 704.60
								\$10,722.10