



## Meridian Environmental Consulting, LLC

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March 22, 2020

Carrie Stoltz  
Wisconsin Department of Natural Resources  
107 Sutliff Avenue  
Rhineland, Wisconsin 54501

Subject:

**Change Order:**

- Operate SVE System thru May
- Define LNAPL north of MW-4
- Vapor Probes next to Indianhead Café
- Define extent NR140 ES in deeper sand aquifer
- Ground Water Sampling (all MWs and Extraction Wells)
- Abandon PZ-100, EX-6, EX-7
- Progress Report

Autostop (former)  
119 W. 9<sup>th</sup> Street North  
Ladysmith, Wisconsin 54848  
BRRS No. 03-55-282548  
PECFA No. 54848-1295-19  
Meridian No. 05F630

Doug's Tire (former)  
811 Lake Ave W.  
Ladysmith, Wisconsin 54848  
BRRS No. 03-55-000408  
PECFA No. 54848-1215-11  
Meridian No. 05F786

See Progress Report dated February 25, 2020 for background information. Refer to enclosed Figure 1 for reference.

**Proposed Work:**

**Operate SVE System thru May**

The SVE system will be operated as soon as approval is granted until May 31, 2020. At that time, the system will be shut down and the electrical service disconnected.

**Define LNAPL north of MW-4 (Doug's)**

Laser induced fluorescence (LIF) technology will be utilized to define the extent of LNAPL north of MW-4. Three borings (30 ft deep) are planned in the Hwy. 27 Right of Way (ROW) as shown on Figure 1. Additional borings may be needed based on field observations.

### **Vapor Probes next to Indianhead Café** (Doug's)

Six vapor probes will be installed adjacent to the Indianhead Café in the locations shown on Figure 1. The Café is constructed "slab on grade".

The probes will consist of pushing a hollow steel rod to 5 feet depth. A small adapter, called the PRT, threads into the bottom of the rod, attached to PE tubing after the expendable point is pushed off. The rod is sealed around the top. The tubing is purged of atmospheric air and connected to a Summa Canister (6 liter – 30 minute valve) to allow a soil vapor air sample to be collected. The air sample is analyzed for PVOC, Naphthalene, 1,2 DCA, and EDB. The probe will be abandoned upon completion.

### **Define extent NR140 ES in deeper sand aquifer**

The extent of ground water petroleum impacts above NR140 ES (Enforcement Standards) at depth is not well defined. Therefore, we recommend four monitoring wells be installed to a depth of 60 feet to define NR140 ES impacts in the deeper sand aquifer. This effort will not address impacts west of the two sites due to the petroleum sites (Jennerman, Weisenberger).

The monitoring wells will be installed north, northeast, east, and south of the two sites in the locations shown on Figure 1. The wells will be installed with hollow-stem augers and screened 55 – 60 feet below grade. The wells will be tremie-grouted to the surface. The wells will be developed and surveyed relative to the current monitoring well network.

### **Abandon PZ-100, EX-6, EX-7**

Monitoring well PZ-100 is plugged with grout preventing sampling. This well will be abandoned per NR141.

EX-6 and EX-7 are filled with sediment. They will be abandoned per NR141.

### **Ground Water Sampling (all MWs and Extraction Wells)**

The monitoring well network will be sampled including all extraction wells except those extraction wells with LNAPL. The LNAPL thickness will be measured with an Interface Probe and with a bailer.

The new wells will be sampled twice: April and May (at least 4 weeks apart).

The wells will be sampled for PVOC and Naphthalene.

### **Progress Report**

A Progress Report will be submitted summarizing the above work.

### COST

The Cost for this work is provided in the attached Cost Estimate.

Please note that the SVE remedial costs, additional wells and subsequent ground water sampling are applied to the Autostop site to help that site seek Closure.


The vapor probes and LIF borings are applied to the Doug's site.

#### Cost Sharing

<u>Task</u>	<u>Doug's</u>	<u>Autostop</u>
SVE system operation, Progress Report		\$9,134.48
Define LNAPL/Vapor Probes	\$8,621.44	
Define deep GW contamination (deep wells, sampling)		\$26,626.78

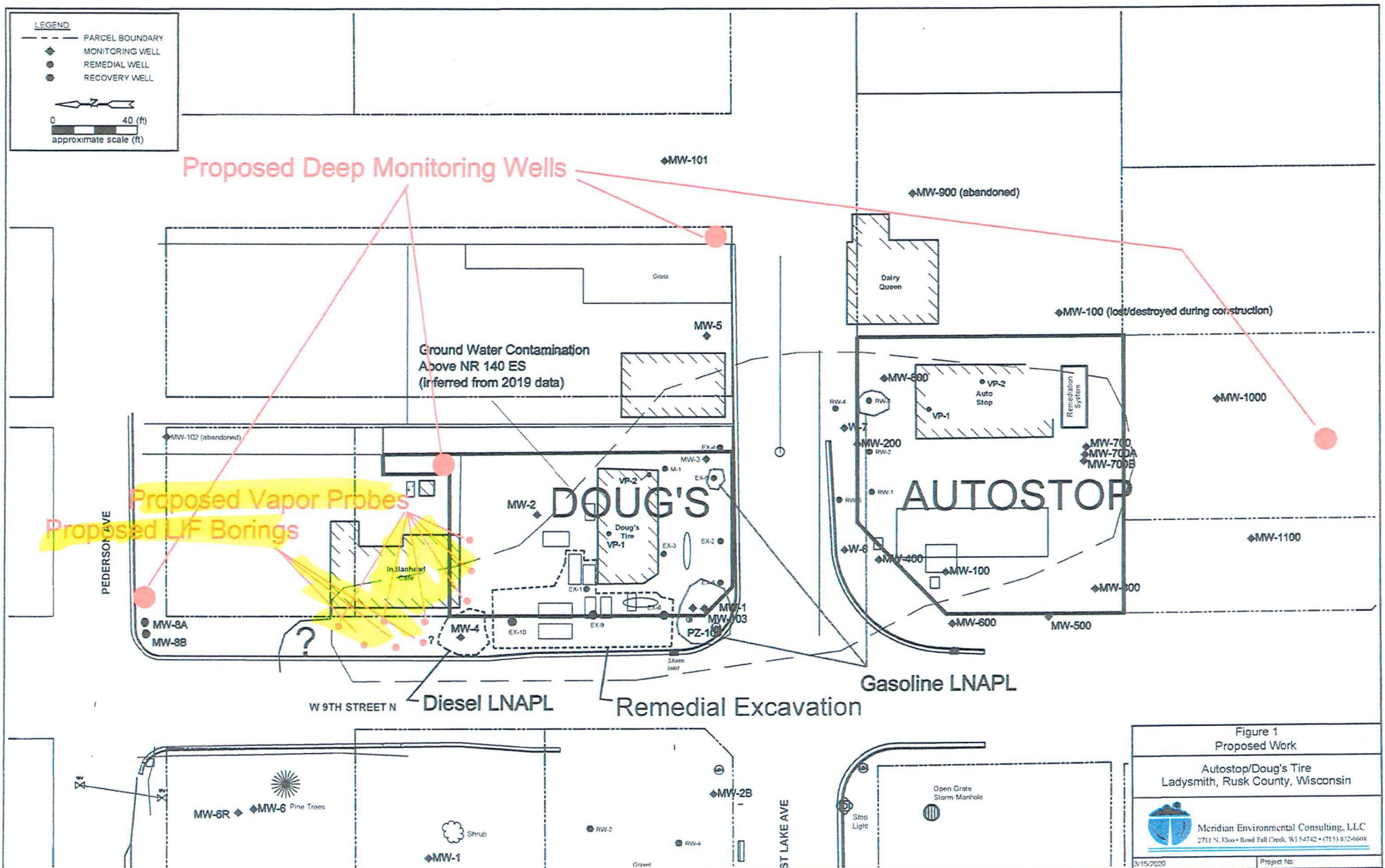
**Total: \$44,382.70**

Sincerely,  
MERIDIAN ENVIRONMENTAL CONSULTING, LLC

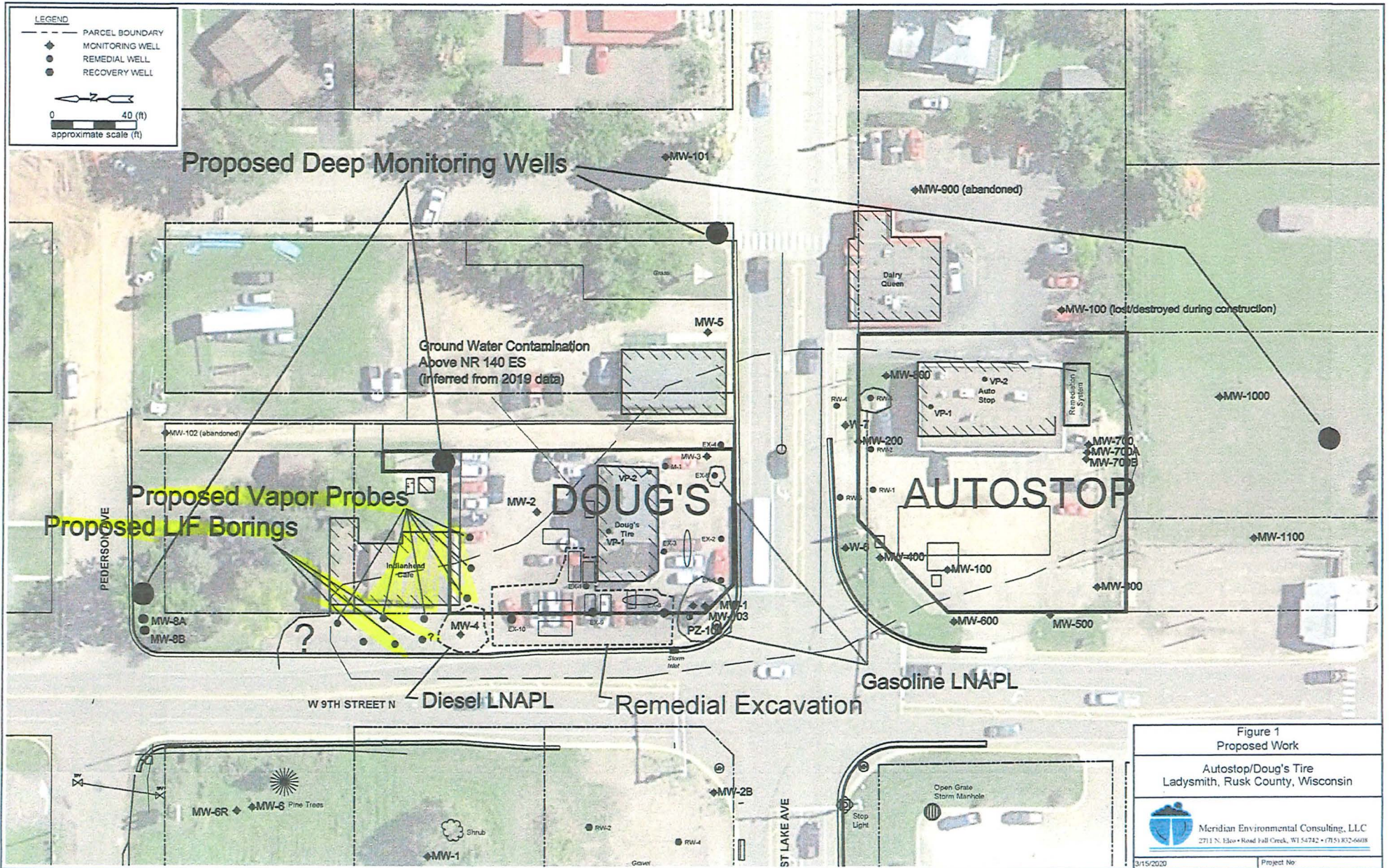


Kenneth Shimko, PG  
Project Manager











# Usual and Customary Standardized Invoice #27

## January 2020 - June 2020



RR-0113a-E

PECFA #: 54848-1295-11-19  
BRRS #: 03-55-000408/-282548  
Site Name: Doug's/Autostop  
Site Address: Ladysmith

Vendor Name: Change Order  
Invoice #: Change Order  
Invoice Date: March 2020  
Check #: Change Order

U&C Total \$ 26,626.78  
Variance to U&C Total \$ 17,755.92  
Grand Total \$ 44,382.70

TASK	TASK DESCRIPTION	SERVICES	ACTIVITY CODE	ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAX UNIT COST	UNITS	TOTAL MAX
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Install 4 PZ (60 ft). Dispose soil. Develop. Survey. Sample new PZs (only) 2X (April, May)(PVOC+N). Sample all wells (April)(PVOC+N) (100, 200, 300, 400, 500, 600, 700, 700A, 700B, 800, 1000, 1100, W-6, W-7, MW-1, -2, -3, -4, -5, -8A, -8B, -101, -102, -103, EX-8, -9, -10). Operate SVE System April, May. Six (6) Soil Vapor Probes next to Indianhead Cafe. LIF borings - define diesel LNAPL north of MW-4.

1	GW Sampling		GS05	Sample Collection	Well	\$ 74.62	35	\$ 2,611.70
1	GW Sampling		GS20	Measure Water Levels (for wells not being sampled)(EX-2, -4, -5, M-1, RW-1, RW-2, RW-3, RW-4, RW-5)	Well	\$ 15.14	9	\$ 136.26
1	GW Sampling		GS25	Primary Mob/Demob	Site	\$ 690.92	2	\$ 1,381.84
4	Waste Disposal	Consultant	WD05	Consultant Coordination	Site	\$ 141.24	1	\$ 141.24
4	Waste Disposal	Commodity	WD10	GW Sample and/or Purge	Drum	\$ 43.37	2	\$ 86.74
4	Waste Disposal	Commodity	WD15	Drill Cuttings	Drum	\$ 111.39	12	\$ 1,336.68
4	Waste Disposal	Commodity	WD17	Landfill Environmental Fee (provide documentation)	ACTUAL COST			
4	Waste Disposal	Commodity	WD20	Free Product	Drum	\$ 122.32		\$ -
4	Waste Disposal	Commodity	WD25	Primary Mob/Demob (soil, purge water)	Site	\$ 316.47	2	\$ 632.94
8	Well Abandonment	Consultant	WAB05	Coordination	Site	\$ 162.86	1	\$ 162.86
8	Well Abandonment	Commodity	WAB35	Well Abandonment Mob/Demob	Site	\$ 453.81		\$ -
8	Well Abandonment	Commodity	WAB40	Well Abandonment (2 inch)(PZ-100)	Ft	\$ 5.74	68	\$ 390.32
8	Well Abandonment	Commodity	WAB45	Well Abandonment (4 inch)(EX-6, EX-7)	Ft	\$ 6.71	60	\$ 402.60
8	Well Abandonment	Commodity	WAB50	Well Abandonment (6 inch)	Ft	\$ 8.22		\$ -
10	Initial Site Survey	Consultant	IS10	Subsequent Surveys	Well	\$ 113.45	4	\$ 453.80
13.a	Drilling In Unconsolidated Soils - With Soil Sampling	Consultant	DR05	0 - 25 ft bgs	Ft	\$ 5.56	100	\$ 556.00
13.a	Drilling In Unconsolidated Soils - With Soil Sampling	Consultant	DR10	26 - 50 ft bgs	Ft	\$ 5.84	100	\$ 584.00
13.a	Drilling In Unconsolidated Soils - With Soil Sampling	Consultant	DR15	51 - 75 ft bgs	Ft	\$ 7.52	40	\$ 300.80
13.a	Drilling In Unconsolidated Soils - With Soil Sampling	Consultant	DR20	Primary Mob/Demob	Site	\$ 652.34	1	\$ 652.34
13.d	Drilling In Unconsolidated Soils - With Soil Sampling	Commodity	DR45	0 - 25 ft bgs	Ft	\$ 17.20	100	\$ 1,720.00
13.d	Drilling In Unconsolidated Soils - With Soil Sampling	Commodity	DR50	26 - 50 ft bgs	Ft	\$ 18.93	100	\$ 1,893.00
13.d	Drilling In Unconsolidated Soils - With Soil Sampling	Commodity	DR55	51 - 75 ft bgs	Ft	\$ 22.18	40	\$ 887.20
14	Monitoring Well Installation	Consultant	MWI05	0 - 25 ft bgs	Ft	\$ 4.01	100	\$ 401.00
14	Monitoring Well Installation	Consultant	MWI10	26 - 75 ft bgs	Ft	\$ 2.81	140	\$ 393.40
14	Monitoring Well Installation	Commodity	MWI15	2 inch PVC Casing	Ft	\$ 17.20	240	\$ 4,128.00
14	Monitoring Well Installation	Commodity	MWI20	Well Development	Well	\$ 152.06	4	\$ 608.24
14	Monitoring Well Installation	Commodity	MWI25	Mob/Demob (For development of grout or slurry sealed wells)	Site	\$ 603.49	1	\$ 603.49
15	Misc. Drilling Activities & Supplies		MDT05	Drill Rig Mob/Demob	Mob/Demob	\$ 1,059.72	1	\$ 1,059.72
15	Misc. Drilling Activities & Supplies		MDT10	Well Cover/flushmount	Each	\$ 208.73	4	\$ 834.92
15	Misc. Drilling Activities & Supplies		MDT25	Commodity Service Provider Per Diem (drilling and direct push)	Person	\$ 209.38	6	\$ 1,256.28
15	Misc. Drilling Activities & Supplies		MDT30	Well Repair	Well	\$ 86.95		\$ -
15	Misc. Drilling Activities & Supplies		MDT41	Private Utility Locate	ACTUAL COST			
20	Soil Boring/Monitoring Well Permits		SBMWP05	Soil Boring/Monitoring Well Permit (City of Ladysmith)	Permit	\$ 253.50	1	\$ 253.50
20	Soil Boring/Monitoring Well Permits		SBMWP10	Permit Fee (copy of permit & fee receipt required)	Permit Fee			
21	Access Agreements		AA05	Access Agreements	Property	\$ 414.00	1	\$ 414.00
31	Consultant Overnight Per Diem		COPD05	Overnight	Night	\$ 125.09	3	\$ 375.27
33	Schedule Of Laboratory Maximums	Commodity		Laboratory (see task 33 total on Lab Schedule)	Lab Schedule			\$ 1,375.41
36	Change Order Request		COR05	Change Order Request (cost cap exceedance requests)	Change Order	\$ 393.23	1	\$ 393.23

Variance Operate SVE System (April - May)(see attached spreadsheet) see spreadsheet \$ 9,134.48

	Define Extent LNAPL north of MW-4	LIF Borings/ Vapor Probes (Matrix) (see cost estimate)	Job	see estimate	1	\$ 5,650.00
	Soil Vapor Probes to assess VI next to Indianhead Cafe	Consultant Oversight/Coord. LIF, Vapor Probes	hour	\$ 112.96	14	\$ 1,581.44
Variance		Lab Analysis - Summa Cans (TP-15 PVOC, Naph: 1.2 DCA, EDB)	Summa Can	\$ 225.00	6	\$ 1,350.00

Doug's



Meridian Environmental Consulting, LLC

Doug's

## Request for Bid: Soil Vapor Probes and LIF probes

Ladysmith, Wisconsin

### Scope of Work:

- Install 3 vapor probes to 5 feet to collect soil vapor air samples. Dakota will provide tubing and connections to attach Summa Canisters. Dakota will purge soil vapor sample line prior to connecting to Summa Can.
- Install 3 LIF probes to define extent of diesel LNAPL. 30 ft depth.
- Report

### Site Conditions:

- Soils in Ladysmith are silty sand with rocks. Direct Push technology can be difficult in these soils.
- Depth to water is 20 - 22 feet (typical)
- Work to be completed after 5 pm or Saturday due to car dealership business

### Meridian:

- Will clear utilities
- Obtain access to DOT ROW, property
- Dispose of soil waste

Task	Units	#Units	Cost/Unit	Cost
Mob/demob	Job	1	\$3.25	910.00
Vapor Probes	each	3	\$30/point	90.00
LIF borings	ft	90	\$4000/day	4000.00
LIF Report.	Report	1	\$250 L.S.	250.00
Per Diem.		1	Total:	350.00

Company Name: Dakota Technologies  
Signature: Bob Giddings for Dan Thompson  
Date: 3/17/2020

$$+ 3 \times 30 = 90$$

$$+ 350 / \text{Day} \quad \text{Total} = \$5600 + 90 = 5690$$

Ken Shimko

Doug's

**From:** Kirsten Hogberg <Kirsten.Hogberg@pacelabs.com>  
**Sent:** Monday, March 16, 2020 8:32 AM  
**To:** kshimko.meridianenv@gmail.com  
**Subject:** Re: Cost for Summa Analysis

Ken,

For the shorter analyte list, it will be \$150 for the analytical and \$75 for canister rental. We are still about 2 weeks out with canister orders so if you have a collection schedule in place, it's best to order ahead.

Thanks,

**Kirsten Hogberg**

Project Manager | Environmental Sciences  
1700 Elm St. SE Suite 200 Minneapolis, MN 55414  
D: 612.607.6407 | M: 612.607.1700 | [pacelabs.com](http://pacelabs.com)



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>>> "Ken Shimko" <kshimko.meridianenv@gmail.com> 3/15/2020 1:31 PM >>>  
Hi Kirsten.

I am preparing budget for collecting 3 air samples:

3 Summa Canisters (6 liter, 30 min flow valve)  
Analysis: PVOC+Naphthalene, 1,2 DCA, EDB  
Location: Ladysmith, Wisconsin

Can you tell me the cost per canister?

Thanks