Meridian Environmental Consulting, LLC

March 22, 2020

auto stop

Carrie Stoltz
Wisconsin Department of Natural Resources
107 Sutliff Avenue
Rhinelander, 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. 9th Street North
Ladymith, Wisconsin 54848
BRRTS No. 03-55-282548
PECFA No. 54848-1295-19
Meridian No. 05F630

Doug's Tire (former)
811 Lake Ave W.
Ladysmith, Wisconsin 54848
BRRTS 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**~~

~~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.~~

2711 N. Elco Road • Fall Creek, WI 54742 • (715) 832-6608 • Fax (715) 832-6797

~~Vapor Probes next to Indianhead~~ Café

~~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

Task	Doug's	Autostop
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

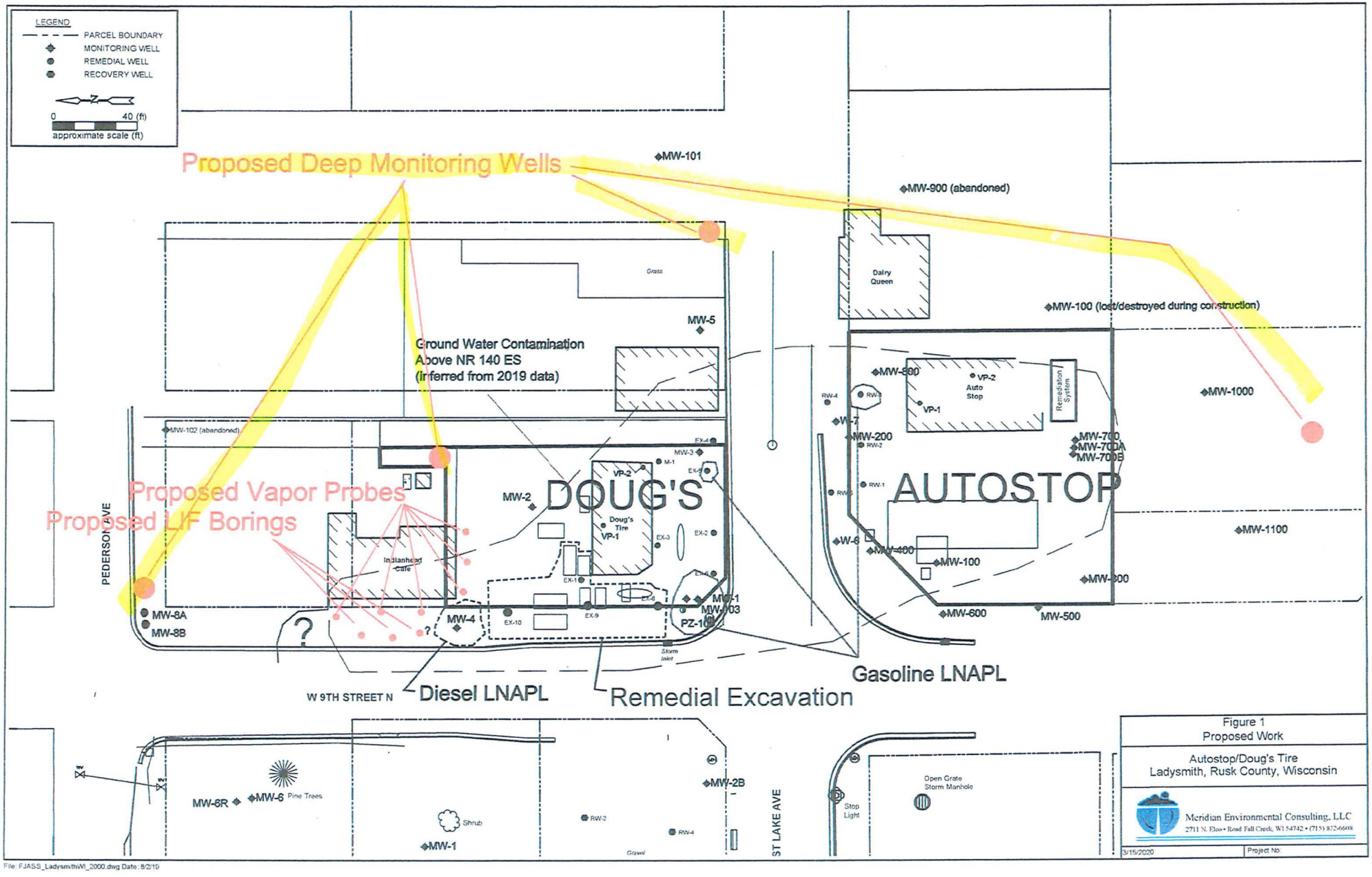

Figure 1
Proposed Work

Autostop/Doug's Tire
Ladysmith, Rusk County, Wisconsin

Meridian Environmental Consulting, LLC
2711 N. Eloo • Road Fall Creek, WI 54742 • (715) 832-6608

3/15/2020 | Project No:

File: FJASS_LadysmithWI_2000.dwg Date: 8/2/19

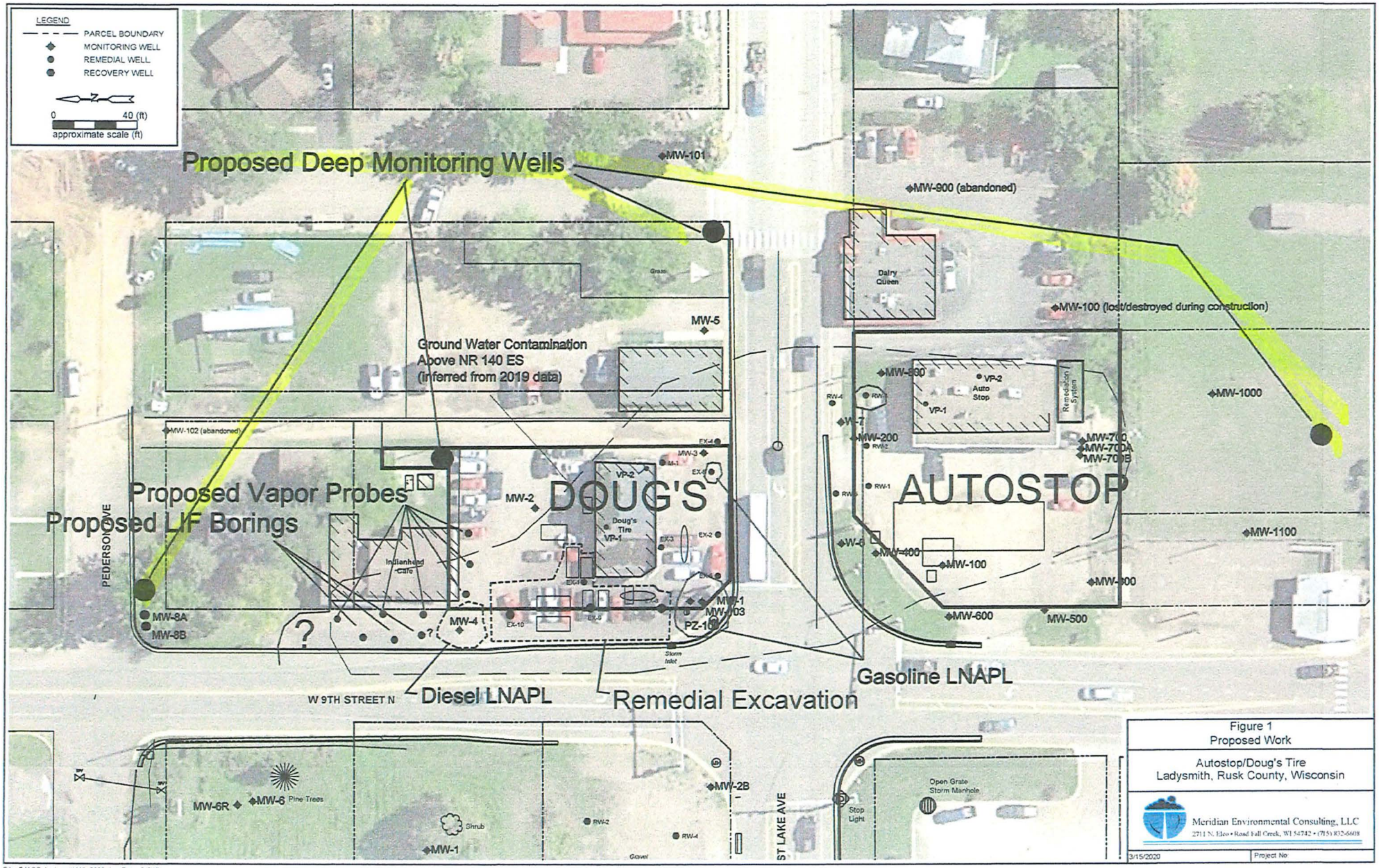

Figure 1
Proposed Work

Autostop/Doug's Tire
Ladysmith, Rusk County, Wisconsin

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3/15/2020 | Project No

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Usual and Customary Standardized Invoice #27
January 2020 - June 2020

RR-0113a-E

PECFA #: 54848-1295-11/-19
BRRTS #: 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
	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			1	$	200.00
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)	~~Lab~~ see estimate			1	$	~~5,660.00~~
	~~Soil Vapor Probes to assess VI next to Indianhead Café~~			Consultant Oversight/Coord: LIF, Vapor Probes	~~Lead~~	$	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

SVE System Operation and Maintenance Costs: April - May 31, 2020

AutoStop and Doug's Tire Combined System O&M
Ladysmith, Wisconsin
Meridian Nos. 05F630/786

Tasks:
- monthly site visits (system maintenance/air sampling)(3X: April (start), May, June 1 (shut-down))
- project management/data evaluation
- Progress report with recommendations

Task	Units	#Units	Cost/Unit	Cost	Subtotal:	Cost Sharing		Check
Monthly System Maintenance/Air Sampling						Doug's	Autostop	
(April (start), May, June (shut-down)(3 events)						3/8	5/8	
	Labor and Mileage PER TRIP							
Prep/deprep	hr	1	$94.13	$94.13				
O&M system maintenance + Air Sample- Per Trip	hr	4	$94.13	$376.52				
travel to/from	hr	3	$94.13	$282.39				
mileage	mi	150	$0.58	$87.00				
			Monthly Subtotal:	$840.04				
	3 monthly trips + 1 contingency = 4 total				**$3,360.16**			
				Total:	**$3,360.16**	$1,260.06	$2,100.10	$3,360.16
Miscellaneous Materials (PVC piping, valve repair, minor system components, etc.)				$250.00	**$250.00**	$93.75	$156.25	$250.00
Electricity (estimate $300/month (varies seasonally) - includes costs Jan -March 2020 (heater only))	month	2	$300.00	$600.00	**$600.00**	$225.00	$375.00	$600.00
Air Sampling (air sample)(1 per month x 2 months = 2 samples)								
Benzene *(U&C A1 - see U&C)*								
GRO *(U&C A3 - see U&C)*								
air pump rental (variance)(monthly)	event	3	$60.00	$180.00	**$180.00**	$67.50	$112.50	$180.00
Data Evaluation (Engineer)(5 hrs per month x 2 mos.)								
Engineer	hr	10	$112.96	$1,129.60	**$1,129.60**	$423.60	$706.00	$1,129.60
Project Mgmt (4 hrs per month x 2 mos.)								
PM	hr	8	$112.96	$903.68	**$903.68**	$338.88	$564.80	$903.68
Progress Report (PG/PE) (GW sampling, SVE, VI, GW Sampling, MW install, recommendations)	hr	24	$112.96	$2,711.04	**$2,711.04**	$1,016.64	$1,694.40	$2,711.04
				Total:	**$9,134.48**	$3,425.43	$5,709.05	$9,134.48

Usual and Customary Standardized Invoice #27
January 2020- June 2020

RR-0113a-E

		TOTAL LAB CHARGES	**$ 1,375.41**		**TASK 33**	**41**	**$ 1,375.41**	**TASK 24**		**0**	**$**	**-**
MATRIX	REF CODE	REIMBURSABLE ANALYTE	UNITS		MAX COST	SAMPLES	TOTAL	MAX COST	SAMPLES		TOTAL	
AIR	A1	Benzene	SAMPLE	$	46.29	3	$ 138.87					
AIR	A2	BETX	SAMPLE	$	50.94		$ -					
AIR	A3	GRO	SAMPLE	$	47.48	3	$ 142.44					
AIR	A4	VOC's	SAMPLE	$	74.09		$ -					
WATER	W1	GRO/PVOC	SAMPLE	$	30.07		$ -					
WATER	W2	PVOC	SAMPLE	$	27.80		$ -					
WATER	W3	PVOC + 1,2 DCA	SAMPLE	$	45.10		$ -					
WATER	W4	PVOC + Naphthalene	SAMPLE	$	31.26	35	$ 1,094.10					
WATER	W5	VOC	SAMPLE	$	74.09		$ -					
WATER	W6	PAH	SAMPLE	$	75.17		$ -					
WATER	W7	Lead	SAMPLE	$	12.76		$ -					
WATER	W8	Cadmium	SAMPLE	$	13.96		$ -					
WATER	W9	Hardness	SAMPLE	$	12.76		$ -					
WATER	W10	BOD, Total	SAMPLE	$	24.34		$ -					
WATER	W11	Nitrate	SAMPLE	$	11.58		$ -					
WATER	W12	Total Kjeldahl	SAMPLE	$	20.88		$ -					
WATER	W13	Ammonia	SAMPLE	$	17.42		$ -					
WATER	W14	Sulfate	SAMPLE	$	10.50		$ -					
WATER	W15	Iron	SAMPLE	$	10.50		$ -					
WATER	W16	Manganese	SAMPLE	$	10.50		$ -					
WATER	W17	Alkalinity	SAMPLE	$	10.50		$ -					
WATER	W18	methane	SAMPLE	$	47.48		$ -					
WATER	W19	Phosphorous	SAMPLE	$	18.60		$ -					
WATER	W20	VOC Method 524.2	SAMPLE	$	181.59		$ -					
WATER	W21	EDB Method 504	SAMPLE	$	98.31		$ -	MAX COST	SAMPLES		TOTAL	
SOILS	S1	GRO	SAMPLE	$	25.52		$ -	$ 25.52			$	-
SOILS	S2	DRO	SAMPLE	$	31.26		$ -	$ 31.26			$	-
SOILS	S3	GRO/PVOC	SAMPLE	$	28.98		$ -	$ 28.98			$	-
SOILS	S4	PVOC	SAMPLE	$	26.60		$ -	$ 26.60			$	-
SOILS	S5	PVOC + 1,2 DCA + Naphthalene	SAMPLE	$	50.94		$ -	$ 50.94			$	-
SOILS	S6	PVOC + Naphthalene	SAMPLE	$	37.10		$ -	$ 37.10			$	-
SOILS	S7	VOC	SAMPLE	$	74.09		$ -	$ 74.09			$	-
SOILS	S8	SPLP Extraction VOC only	SAMPLE	$	52.13		$ -	$ 52.13			$	-
SOILS	S9	PAH	SAMPLE	$	75.17		$ -	$ 75.17			$	-
SOILS	S10	Lead	SAMPLE	$	12.76		$ -	$ 12.76			$	-
SOILS	S11	Cadmium	SAMPLE	$	15.04		$ -			**TASK 24 TOTAL**	**$**	**-**
SOILS	S12	Free Liquid	SAMPLE	$	11.58		$ -					
SOILS	S13	Flash Point	SAMPLE	$	26.60		$ -					
SOILS	S14	Grain Size - dry	SAMPLE	$	44.02		$ -					
SOILS	S15	Grain Size - wet	SAMPLE	$	59.05		$ -					
SOILS	S16	Bulk Density	SAMPLE	$	13.96		$ -					
SOILS	S17	Permeability	SAMPLE	$	42.83		$ -					
SOILS	S18	Nitrogen as Total Kjeldahl	SAMPLE	$	20.88		$ -					
SOILS	S19	Nitrogen as Ammonia	SAMPLE	$	17.42		$ -					
SOILS	S20	% Organic Matter	SAMPLE	$	30.07		$ -					
SOILS	S21	TOC as NPOC	SAMPLE	$	59.05		$ -					
SOILS	S22	Soil Moisture Content	SAMPLE	$	7.03		$ -					
SOILS	S23	Air Filled Porosity	SAMPLE	$	26.60		$ -					
SOILS	S24	% Total Solids	SAMPLE	$	7.03		$ -					
SOILS	S25	Field Capacity	SAMPLE	$	28.98		$ -					
SOILS	S26	TCLP Lead	SAMPLE	$	85.65		$ -					
SOILS	S27	Cation Exchange (Ca, MG, & K)	SAMPLE	$	27.80		$ -					
SOILS	S28	TCLP Cadmium	SAMPLE	$	85.65		$ -					
SOILS	S29	TCLP Benzene	SAMPLE	$	85.65		$ -					
LNAPL	LFPS01	Viscosity + Density Interfacial tension I (LNAPL/water [dyne/cm]) Interfacial tension II (LNAPL/air [dyne/cm]) Interfacial tension III (water/air) [dyne/cm])	SAMPLE	$	578.17		$ -					
						TASK 33 TOTAL	**$ 1,375.41**					