Meridian Environmental Consulting, LLC

March 27, 2018

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

Subject: **Soil Vapor Extraction System: Semi-Annual 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

Dear Carrie:

This letter provides a summary of the SVE system operation at the above two sites over the past 6 months (October 2017 – March 2018).

The system performed poorly from December – March 3 due to pipes freezing. The pipes were steamed open March 3 and the system performance is returning to normal.

Based on the performance data, we recommend the SVE system continue to operate until December 2018. We also recommend monthly pumping of the SVE Vents with LNAPL (i.e., RW-3, EX-2, EX-4, EX-5, M-1) to enhance remediation.

BACKGROUND INFORMATION

The reader is referred to the project files for more detailed background information. Summary information is provided below.

A Soil Vapor Extraction (SVE) system was installed in October 2015 at the two properties known as Doug's and Autostop. The intent of the SVE system is to remove as much petroleum impacts as practicable from a targeted area (known as LNAPL Focus Area)(Figure 1). Petroleum vapors are removed from the LNAPL Focus Area by venting extraction wells RW-1, RW-2, RW-3, RW-4, RW-5, EX-2, EX-4, EX-5, M-1.

The SVE system is housed in a trailer located at the south end of the Autostop building (Figure 1). The mechanical system consists of a blower (5 hp) which pulls soil gas (including LNAPL vapors) from the subsurface and discharges these vapors to the atmosphere.

The extraction wells are individually connected to the SVE trailer via individual piping. Piping was installed under Highway 8 using directional boring equipment to connect to EX-2, EX-4, and EX-5, and M-1.

The SVE discharge was treated with a flame oxidizer for the first 4 months of operation. The VOC load decreased after the initial spike which is typical of soil vapor extraction. Therefore the flame oxidizer was removed February 29, 2016 and the air discharge vented directly to the atmosphere (25 ft stack). Discharge mass is subsequently controlled by regulating the air flow rate from the system using a VFD (variable frequency drive) on the blower motor.

SVE SYSTEM OPERATION

Regular (monthly) System Checks

The system was checked at least monthly in October and November and at least twice per month December – March. System operation data was collected including air flow rate, vacuum, and air samples.

The piping froze in December due to the cold winter restricting and/or blocking air flow in all vents except R5. R2 remained open through the winter but the air flow was significantly reduced. The piping was steamed open March 3 and air flow has improved.

Condensation is produced as the warm soil air is cooled in the piping. This is especially problematic in the piping from the vents at Doug's due to passing under Hwy. 8 without insulation. The Autostop vents tend to have less condensation. Condensation is reduced considerably during the summer months.

Air Sampling

Attachment A contains the analytical reports for the air samples. The results are summarized in Table 1.

The system removed approximately 121 lbs of benzene and 6759 lbs of VOCs (reported as gasoline) during the reporting period (October 2017 – March 2018). No discharge limits were exceeded.

Graphs of the system air discharge are provided in Figure 2. These graphs illustrate the VOC and Benzene discharge concentrations were reduced considerably due to flow being restricted/blocked from the more contaminated vents. The discharge samples primarily measured the discharge from R5 which remained open while flow from the other vents decreased or ceased during the winter conditions.

Future operation will focus exclusively on the vents with LNAPL (i.e., R3, EX-2, EX-4, EX-5, and M-1).

Ground Water and LNAPL Measurements

Table 2 summarizes the ground water and LNAPL measurements from the SVE vents. The depth to ground water and to LNAPL was measured using an Interface Probe. In addition, the product (or LNAPL) thickness was measured by using a clear bailer. Typically, the interface probe indicates more LNAPL because it measures the dissolved phase LNAPL present below the product layer.

Table 3 includes water levels from selected wells (e.g., MW-100, -700, -800, -5) measured December - March. Tables 4 and 5 summarize historical ground water level measurements from Autostop and Doug's, respectively.

The hydrograph on Table 3 illustrates the decrease in water levels over the time period December – March. Figure 3 is a hydrograph from MW-100 illustrating historical ground water level fluctuations.

The water level measurements combined with the difficulty experienced with winter operation (i.e., frozen piping) indicates the optimal operation time is from April – December. The water table is lowest in early spring (April) exposing more vadose zone to venting. The water table may rise during the summer due to precipitation but this effect is offset by the improved air flow and reduction in condensation. The discharge data summarized in Figure 2 illustrates the increased VOC/Benzene discharge mass during the summer months.

Disposal of Remediation Waste

LNAPL was bailed from the SVE vents during each measurement event. The LNAPL is currently stored in the aboveground tank.

Water which accumulates in the knockout tank and pipe sumps is temporarily stored onsite in drums and subsequently disposed at the Bloomer Wastewater Treatment Plant.

CONCLUSIONS AND RECOMMENDATIONS

The SVE system removes hydrocarbons from the subsurface. This has reduced LNAPL thicknesses at the Autostop site but with less effect at the Dougs Tire site.

The Doug's Tire site is not responding as well because air flow through the piping is restricted during the winter due to freezing under Hwy. 8. Flow through the insulated Autostop piping has been more productive throughout the year resulting in the decrease in LNAPL (especially in MW-200, RW-1, RW-2, RW-5). In addition, pumping of the Autostop SVE vents in 2012 (16 weekly events) removed 4470 gallons of fluid of which 1300 gallons was LNAPL.

The SVE discharge concentrations decreased almost to zero during the winter of 2017/2018 due to frozen piping. It is noteworthy that the City of Ladysmith advised residents to keep water running to keep their sewer and water piping from freezing. City personnel indicate the frost was greater than 6 feet.

We have the following recommendations to enhance the removal of VOCs at the site.

- The system should be operated from April – December 2018 based on the continuous removal of VOCs from the subsurface by the SVE system. The focus will be on the vents with LNAPL, i.e., RW-3, EX-2, EX-4, EX-5, and M-1.

- The SVE vents should be measured at least quarterly for ground water levels and LNAPL thickness.

- The monitoring well network at Doug's and Autostop should be sampled in the fall of 2018. This information will be useful to prepare Closure documents.

- An annual report will be prepared in Janaury 2019 summarizing the system operation, ground water sampling, and our remedial recommendations to achieve Closure with GIS Registry for Soil and Ground Water. Additional Closure tools (e.g., structural impediment, cap maintenance plan) may be applicable.

- Vents RW-3, EX-2, EX-4, EX-5, and M-1 could be pumped monthly to accelerate removal of LNAPL mass.

COST

A budget for the above recommendations will be submitted in separate correspondence.

Sincerely,
MERIDIAN ENVIRONMENTAL CONSULTING, LLC

Kenneth Shimko, PG
Project Manager

TABLES

Table 1
SVE System Operational Data

Dougs/Autostop
Ladysmith, Wisconsin
Meridian Nos. 05F630/786

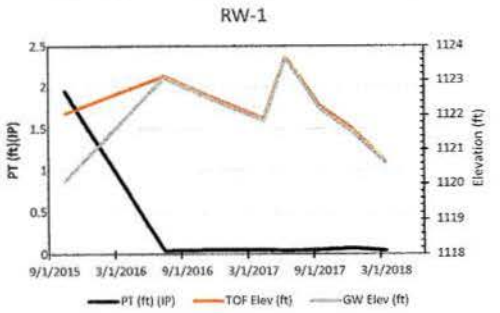
Sample Date	Sample Parameters	Lab Result (ug/m3)	Hour Meter	Hours Operation During Reporting Period	Discharge Flow Rate (SCFM)	Emission Rate (ug/sec)	Emission Rate (lbs/hr)	Cumulative Mass Removed (lbs) (before oxidizer) Benzene	Gasoline*	Vents (X = Open, Blank = Closed, F = Frozen/No Flow) (Not recorded until October 2016) R1	R2	R3	R4	R5	E2	E4	E5	M1	Vacuum (in H2O)	VFD (%)
10/26/2015	Benzene	1,100,000	4	4	160	83,072	0.66	2.63												
	Gasoline*	43,000,000				3,247,360	25.72		102.88											
10/27/2015	Benzene	650,000	12.55	8.55	160	49,088	0.39	5.96												
	Gasoline*	34,000,000				2,567,680	20.34		276.75											
10/28/2015	Benzene	43,000	24.23	11.68	160	3,247	0.03	6.26												
	Gasoline*	29,000,000				2,190,080	17.35		479.34											
11/6/2015	Benzene	360,000	238.62	214.39	125	21,240	0.17	42.32												
	Gasoline*	21,000,000				1,239,000	9.81		2583.13											
11/16/2015	Benzene	290,000	481.5	242.88	135	18,479	0.15	77.87												
	Gasoline*	20,000,000				1,274,400	10.09		5034.58											
11/18/2015	Benzene	200,000	525.32	43.82	144	13,594	0.11	82.58												
	Gasoline*	11,000,000				747,648	5.92		5294.05											
12/17/2015	Benzene	220,000	1222.7	697.38	135	14,018	0.11	160.01												
	Gasoline*	12,000,000				764,640	6.06		9517.35											
1/4/2016	Benzene	290,000	1537.7	315	170	23,270	0.18	218.06												
	Gasoline*	15,000,000				1,203,600	9.53		12520.09											
1/22/2016	Benzene	76,000	1925.3	387.6	138	4,950	0.04	233.26												
	Gasoline*	4,700,000				306,139	2.42		13459.87											
2/15/2016	Benzene	340,000	2499	573.7	125	20,060	0.16	324.41												
	Gasoline*	23,000,000				1,357,000	10.75		19625.68											
Oxidizer Offgas Treatment Removed 2/29/16 - Replaced with 25 ft stack								**Cumulative Discharge (untreated) (begin at zero - March 1)** Benzene	Gasoline*											
3/29/2016	Benzene	420,000	3529	1030	90	17,842	0.14	146												
	Gasoline*	8,800,000				373,824	2.96		3050											
4/20/2016	Benzene	120,000	4055	526	110	6,230	0.05	171												
	Gasoline*	10,000,000				519,200	4.11		5212											
5/23/2016	Benzene	99,000	4765.8	710.8	65	3,037	0.02	189												
	Gasoline*	7,300,000				223,964	1.77		6473											
6/30/2016	Benzene	71,000	5675.1	909.3	44	1,475	0.01	199												
	Gasoline*	7,200,000				149,530	1.18		7550											
8/1/2016	Benzene	150,000	6181	505.9	50	3,540	0.03	213												
	Gasoline*	14,000,000				330,400	2.62		8874											
9/26/2016	Benzene	140,000	7521	1340	54	3,568	0.03	251												
	Gasoline*	19,000,000				484,272	3.84		14013											
10/12/2016	Benzene	46,000	7907	386	60	1,303	0.01	255			X	X		X				X		
	Gasoline*	7,100,000				201,072	1.59		14628											
11/3/2016	Benzene	140,000	8435	528	120	7,930	0.06	288			X	X				X	X	X	32	100
	Gasoline*	12,000,000				679,680	5.38		17470											
12/21/2016	Benzene	130,000	9290	855	50	3,068	0.02	309			X	X				X	X	X	20	50
	Gasoline*	14,000,000				330,400	2.62		19708											
1/19/2017	Benzene	210,000	9580	290	50	4,956	0.04	321				X				X	X	X	8	60
	Gasoline*	18,000,000				424,800	3.36		20683											
2/9/2017	Benzene	100,000	9999	419	90	4,248	0.03	335			X	X				X	X	X	25	60
	Gasoline*	9,200,000				390,816	3.10		21980											
3/8/2017	Benzene	95,000	10643	644	90	4,036	0.03	355				X				X	X	X	26	70
	Gasoline*	7,300,000				310,104	2.46		23562											
4/8/2017	Benzene	16,000	11387	744	80	604	0.00	359				X				X			33	70
	Gasoline*	2,300,000				86,848	0.69		24074											
5/15/2017	Benzene	230,000	12274	887	90	9,770	0.08	427			X	X			X	X	X	X	30	70
	Gasoline*	5,700,000				242,136	1.92		25775											
6/14/2017	Benzene	32,000	12994	720	110	1,661	0.01	437				X				X	X	X	25	80
	Gasoline*	4,600,000				238,832	1.89		27137											
7/11/2017	Benzene	300,000	13620	626	110	15,576	0.12	514							X	X	X	X	30	90
	Gasoline*	6,500,000				337,480	2.67		28810											
8/9/2017	Benzene	220,000	14319	699	125	12,980	0.10	586				X			X	X	X	X	38	100
	Gasoline*	4,900,000				289,100	2.29		30410											
9/12/2017	Benzene	270,000	15135	816	130	16,567	0.13	693			X	X		X	X	X	X	X	22	90
	Gasoline*	7,100,000				435,656	3.45		33226											
9/22/2017	Shut system down to measure GW/LNAPL		15366	231																
9/27/2017	Restart system		15366	0				693	33226											
10/21/2017	Benzene	290,000	15940	574	120	16,426	0.13	768				X		X	X	X	X	X	NM	90
	Gasoline*	10,000,000				566,400	4.49		35801											
11/8/2017	Benzene	110,000	16369	429	100	5,192	0.04	785				X		X	X	X		X	20	70
	Gasoline*	2,600,000				122,720	0.97		36218											
12/8/2017	Benzene	53,000	17090	721	120	3,002	0.02	802			X	X		X	X	X	X	X	18	80
	Gasoline*	7,600,000				430,464	3.41		38676											
1/12/2018	Benzene	32,000	17594	504	140	2,115	0.02	811		X	X	X		X	X	X	X	X	25	100
	Gasoline*	3,500,000				231,280	1.83		39599											
1/24/2018	Benzene	*5,000*	17884	290	90	212	0.00	811		X	X	F		X	F	F	F	F	32	70
	Gasoline*	420,000				17,842	0.14		39640											
2/9/2018	Benzene	12,000	18264	380	80	453	0.00	813		X	X	F		X	F	F	F	F	32	70
	Gasoline*	1,700,000				64,192	0.51		39833											
2/26/2018	Benzene	*5,000*	18640	376	90	212	0.00	813		X	X	F		X	F	F	F	F	30	70
	Gasoline*	480,000				20,390	0.16		39894											
3/3/2018	Benzene	10,000	18759	119	120	566	0.00	814		X	X	X		X	X	X	X	X	25	80
	Gasoline*	1,700,000				96,288	0.76		39985											
3/14/2018	Benzene		19023	264	115	0	0.00	814		X	X	X		X	X	X	X	X	20	80
	Gasoline*					0	0.00		39985											
3/21/2018	Benzene		19192	169	135	0	0.00	814			X	X			X	X	X	X	18	90
	Gasoline*					0	0.00		39985											

5,000 concentration estimated as 1/2 of detection limit

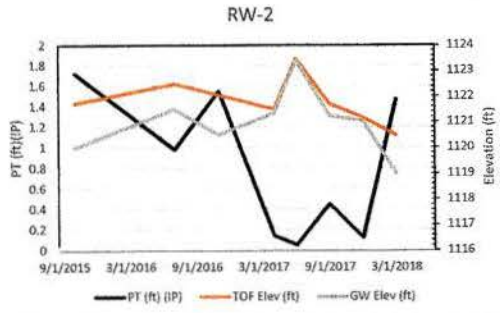
Table 2: LNAPL Thickness Measurements since SVE Startup - Extraction Wells
Autostop/Dougs

AUTOSTOP SVE WELLS

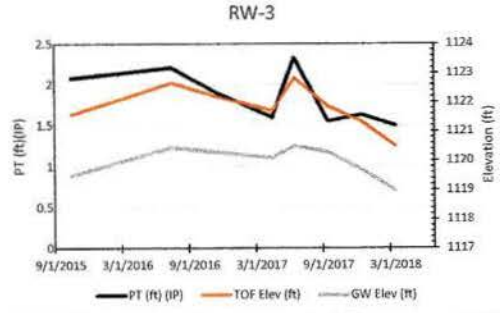
RW-1 (installed August 23, 2012)						
Surface Elevation (approx)				1144		
Top of Casing Elevation (surveyed)				1143.49		
Top of screen elevation				1125.5		
Bottom of Screen Elevation				1115.5		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	21.45	23.4	1.95	NM	1122.04	1120.09
7/30/2016	20.38	20.42	0.04	0	1123.11	1123.07
11/3/2016	20.95	21	0.05	0	1122.54	1122.49
4/8/2017	21.6	21.65	0.05	0	1121.89	1121.84
6/14/2017	19.8	19.84	0.04	0	1123.69	1123.65
9/27/2017	21.22	21.27	0.05	0	1122.27	1122.22
12/20/2017	21.9	21.97	0.07	NM	1121.59	1121.52
3/21/2018	22.83	22.87	0.04	0	1120.66	1120.62



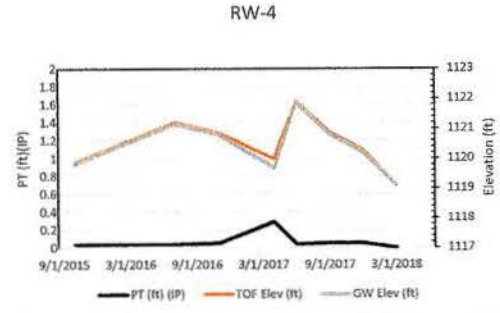
RW-2 (installed August 23, 2012)						
Surface Elevation (approx)				1144		
Top of Casing Elevation (surveyed)				1143.85		
Top of screen elevation				1126		
Bottom of Screen Elevation				1116		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	21.78	23.5	1.72	NM	1121.71	1119.99
7/30/2016	21.02	22	0.98	12	1122.47	1121.49
11/3/2016	21.45	23	1.55	1	1122.04	1120.49
4/8/2017	22.01	22.15	0.14	0.5	1121.48	1121.34
6/14/2017	20.03	20.08	0.05	0	1123.46	1123.41
9/27/2017	21.8	22.25	0.45	0.5	1121.69	1121.24
12/20/2017	22.33	22.45	0.12	NM	1121.16	1121.04
3/21/2018	23.03	24.5	1.47	3	1120.46	1118.99



RW-3 (installed August 23, 2012)						
Surface Elevation (approx)				1144		
Top of Casing Elevation (surveyed)				1143.96		
Top of screen elevation				1125.5		
Bottom of Screen Elevation				1115.5		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	21.92	24	2.08	NM	1121.57	1119.49
7/30/2016	20.84	23.05	2.21	21	1122.65	1120.44
11/3/2016	21.3	23.2	1.9	12	1122.19	1120.29
4/8/2017	21.8	23.4	1.6	16	1121.69	1120.09
6/14/2017	20.67	23	2.33	3	1122.82	1120.49
9/27/2017	21.65	23.2	1.55	16	1121.84	1120.29
12/20/2017	22.17	23.8	1.63	NM	1121.32	1119.69
3/21/2018	23	24.5	1.5	14	1120.49	1118.99



RW-4 (installed June 12, 2015)						
Surface Elevation (approx)				1146		
Top of Casing Elevation (surveyed)				1145.62		
Top of screen elevation				1131		
Bottom of Screen Elevation				1116		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	23.63	23.67	0.04	NM	1119.86	1119.82
7/30/2016	22.3	22.34	0.04	NM	1121.19	1121.15
11/3/2016	22.65	22.7	0.05	NM	1120.84	1120.79
4/8/2017	23.51	23.8	0.29	0	1119.98	1119.69
6/14/2017	21.58	21.62	0.04	0	1121.91	1121.87
9/27/2017	22.63	22.68	0.05	0	1120.86	1120.81
12/20/2017	23.23	23.28	0.05	NM	1120.26	1120.21
3/21/2018	24.39	24.39	0	0	1119.1	1119.1



RW-5 (installed June 12, 2015)						
Surface Elevation (approx)				1144.5		
Top of Casing Elevation (surveyed)				1144.11		
Top of screen elevation				1129.5		
Bottom of Screen Elevation				1114.5		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	21.82	22.4	0.58	NM	1121.67	1121.09
7/30/2016	21.05	21.11	0.06	0	1122.44	1122.38
11/3/2016	21.65	21.7	0.05	0	1121.84	1121.79
4/8/2017	22.25	22.29	0.04	0	1121.24	1121.2
6/14/2017	20.42	20.5	0.08	0	1123.07	1122.99
9/27/2017	21.9	21.94	0.04	0	1121.59	1121.55
12/20/2017	22.57	22.61	0.04	NM	1120.92	1120.88
3/21/2018	28.52	28.59	0.07	FILM	1119.97	1119.9

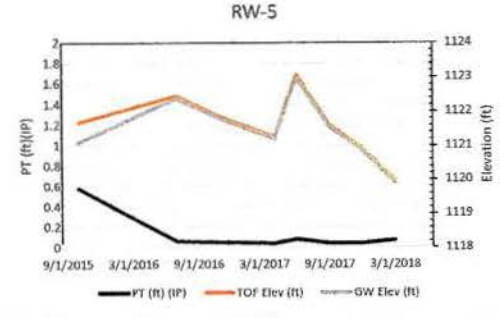
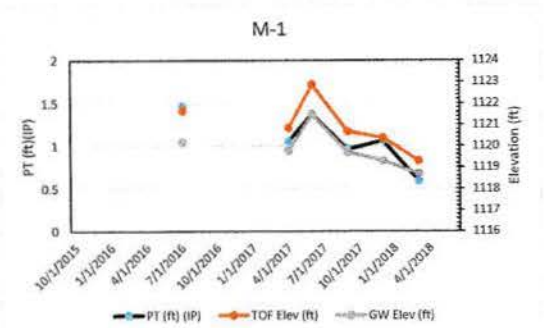


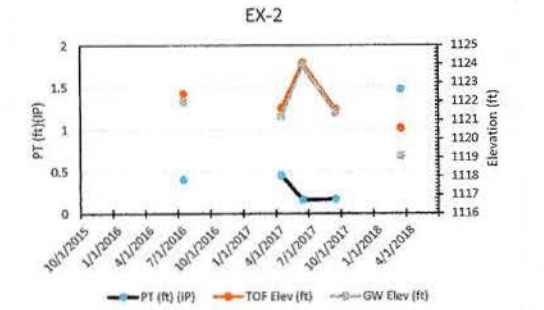
Table 2: LNAPL Thickness Measurements since SVE Startup - Extraction Wells
Autostop/Dougs

DOUGS SVE WELLS

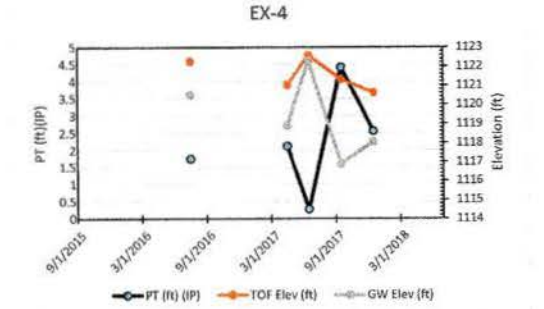
M-1 (installed June 11, 2015)						
Surface Elevation (approx)				1145		
Top of Casing Elevation (surveyed)				1144.89		
Top of screen elevation				1130		
Bottom of Screen Elevation				1115		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	NM	NM		NM		
7/30/2016	21.84	23.3	1.46	9	1121.65	1120.19
11/3/2016	NM	NM		14		
4/8/2017	22.65	23.7	1.05	6	1120.84	1119.79
6/14/2017	20.63	22	1.37	8	1122.86	1121.49
9/27/2017	22.82	23.78	0.96	2	1120.67	1119.71
12/20/2017	23.12	24.18	1.06	NM	1120.37	1119.31
3/21/2018	24.21	24.8	0.59	1	1119.28	1118.69



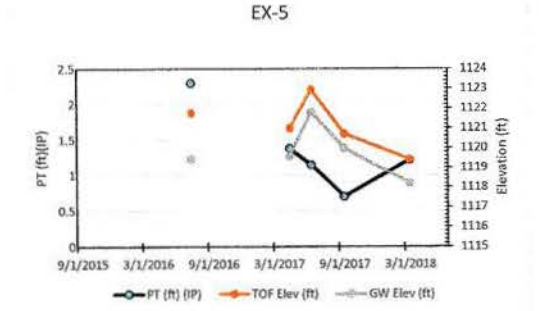
EX-2 (installed 1/19/1992)						
Surface Elevation (approx)				1144.25		
Top of Casing Elevation (surveyed)				1144.08		
Top of screen elevation				1124		
Bottom of Screen Elevation				1109		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	NM	NM		NM		
7/30/2016	21.1	21.5	0.4	2	1122.39	1121.99
11/3/2016	NM	NM		0		
4/8/2017	21.85	22.3	0.45	1	1121.64	1121.19
6/14/2017	19.44	19.6	0.16	0.5	1124.05	1123.89
9/27/2017	21.92	22.09	0.17	0.25	1121.57	1121.4
12/20/2017	INACCESSIBLE - FROZEN					
3/21/2018	22.93	24.4	1.47	14	1120.56	1119.09



EX-4 (installed 11/2/2002)						
Surface Elevation (approx)				1145		
Top of Casing Elevation (surveyed)				1144.89		
Top of screen elevation				1131		
Bottom of Screen Elevation				1111		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	NM	NM		NM		
7/30/2016	21.25	23	1.75	17	1122.24	1120.49
11/3/2016	NM	NM		12		
4/8/2017	22.48	24.6	2.12	24	1121.01	1118.89
6/14/2017	20.93	21.2	0.27	0.5	1122.56	1122.29
9/27/2017	22.18	26.6	4.42	>36	1121.31	1116.89
12/20/2017	22.89	25.45	2.56	NM	1120.6	1118.04
3/21/2018	water flooding well area					



EX-5 (installed 11/2/1992)						
Surface Elevation (approx)				1145		
Top of Casing Elevation (surveyed)				1144.77		
Top of screen elevation				1130		
Bottom of Screen Elevation				1110		
Meas. Date	**DTP(ft)**	**DTW(ft)**	**PT (ft) (IP)**	**PT(inch)(bailer)**	**TOF Elev (ft)**	**GW Elev (ft)**
10/26/2015	NM	NM		NM		
7/30/2016	21.75	24.05	2.3	7	1121.74	1119.44
11/3/2016	NM	NM		12		
4/8/2017	22.52	23.9	1.38	8	1120.97	1119.59
6/14/2017	20.55	21.7	1.15	6	1122.94	1121.79
9/27/2017	22.8	23.5	0.7	1.5	1120.69	1119.99
12/20/2017	inaccessible - frozen					
3/21/2018	24.08	25.3	1.22	1	1119.41	1118.19



DTP - depth to product (interface probe)
DTW - depth to water (interface probe)
PT (IP) - product thickness using interface probe (IP) (feet)
PT (bailer) - product thickness measured visually with bailer (inches)
TOF - top of fluid elevation (LNAPL and/or GW)
GW - ground water elevation using interface probe

Table 3: Water Level Measurements (MW-100, -700, -800, -5)(September - March)

Autostop/Dougs

MW-100		
Surface Elevation (ft)		1142
Top of Casing Elevation (ft)		1141.78
Top of Screen Elevation (ft)		1127
Bottom of Screen Elevation (ft)		1117
Meas. Date	DTW	GW Elevation (ft)
9/27/2017	16.06	1125.72
12/20/2017	17.13	1124.65
1/10/2018	17.22	1124.56
1/24/2018	17.66	1124.12
2/9/2018	17.9	1123.88
2/26/2018	18.08	1123.7
3/3/2018	18.16	1123.62
3/21/2018	18.23	1123.55

MW-700		
Surface Elevation (ft)		1142.5
Top of Casing Elevation (ft)		1141.97
Top of Screen Elevation (ft)		1129
Bottom of Screen Elevation (ft)		1119
Meas. Date	DTW	GW Elevation (ft)
9/27/2017	NM	NM
12/20/2017	17.97	1124
1/10/2018	18.3	1123.67
1/24/2018	18.62	1123.35
2/9/2018	18.88	1123.09
2/26/2018	19.14	1122.83
3/3/2018	POND	
3/21/2018	19.39	1122.58

MW-800		
Surface Elevation (ft)		1145.5
Top of Casing Elevation (ft)		1145.08
Top of Screen Elevation (ft)		1128
Bottom of Screen Elevation (ft)		1118
Meas. Date	DTW	GW Elevation (ft)
9/27/2017	22.7	1122.38
12/20/2017	23.2	1121.88
1/10/2018	23.88	1121.2
1/24/2018	SNOWPILE	
2/9/2018	SNOWPILE	
2/26/2018	SNOWPILE	
3/3/2018	SNOWPILE	
3/21/2018	24.55	1120.53

MW-5		
Surface Elevation (ft)		1147
Top of Casing Elevation (ft)		1146.49
Top of Screen Elevation (ft)		1127
Bottom of Screen Elevation (ft)		1117
Meas. Date	DTW	GW Elevation (ft)
9/27/2017	NM	NM
12/20/2017	22.07	1124.42
1/10/2018	22.42	1124.07
1/24/2018	22.57	1123.92
2/9/2018	22.71	1123.78
2/26/2018	22.91	1123.58
3/3/2018	22.88	1123.61
3/21/2018	23.13	1123.36

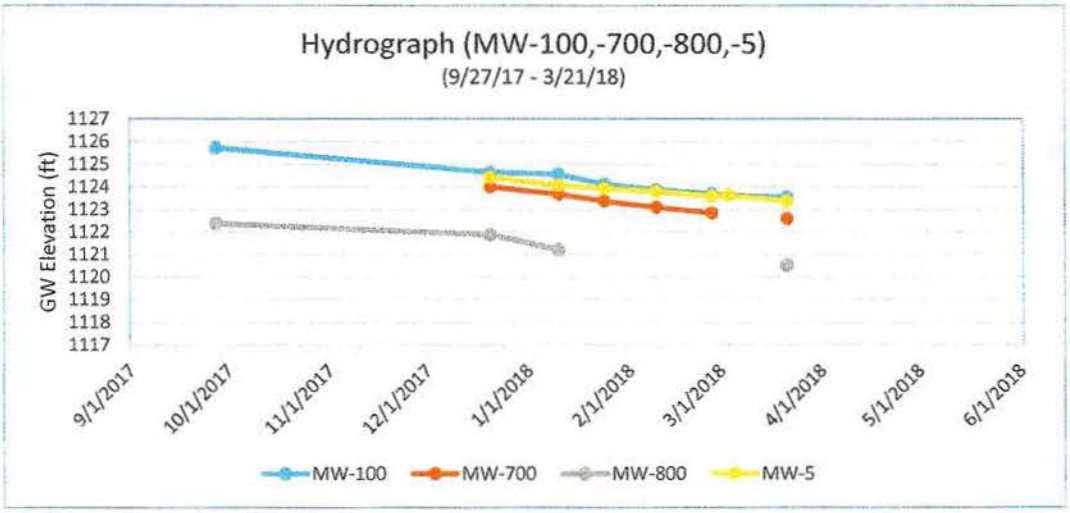


Table 4: Ground Water Level Measurements
Autostop
Ladysmith, Wisconsin

Wells with LNAPL

MW-100					
Surface Elevation (ft.)		1142			
Top of Casing Elevation (ft.)		1141.78			
Top of Screen Elevation (ft)		1127			
Bottom of Screen Elevation (ft)		1117			
Meas. Date	DTF (ft)	DTW (ft)	TOF (ft)	GW Elev (ft)	PT (ft)
4/27/2005		15.8		1125.98	
10/25/2005		16.59		1125.19	
4/26/2006		17.6		1124.18	
10/24/2006		17.4		1124.38	
8/7/2008		16.01		1125.77	
11/12/2008		16.9		1124.88	
2/25/2009		FP			
5/21/2009		FP			
7/22/2010	16.35	17.9	1125.43	1123.88	1.55
1/6/2012		17.79		1123.99	
4/4/2012	17.88	17.98	1123.9	1123.8	0.1

MW-200					
Surface Elevation (ft.)		1145			
Top of Casing Elevation (ft.)		1144.71			
Top of Screen Elevation (ft)		1128			
Bottom of Screen Elevation (ft)		1118			
Meas. Date	DTF (ft)	DTW (ft)	TOF (ft)	GW Elev (ft)	PT (ft)
4/27/2005		FP			
10/25/2005		FP			
4/26/2006		FP			
10/24/2006		FP			
8/7/2008		FP			
11/12/2008		FP			
2/25/2009		FP			
5/21/2009		FP			
7/22/2010	22.66	24.25	1119.12	1117.53	1.59
1/6/2012					
4/4/2012	23.31	25.05	1118.47	1116.73	1.74

MW-400					
Surface Elevation (ft.)		1144			
Top of Casing Elevation (ft.)		1143.77			
Top of Screen Elevation (ft)		1124			
Bottom of Screen Elevation (ft)		1114			
Meas. Date	DTF (ft)	DTW (ft)	TOF (ft)	GW Elev (ft)	PT (ft)
4/27/2005		FP			
10/25/2005		FP			
4/26/2006		FP			
10/24/2006		FP			
8/7/2008		FP			
11/12/2008		FP			
2/25/2009		FP			
5/21/2009		FP			
7/22/2010	21.48	22.2	1120.3	1119.58	0.72
1/6/2012					
4/4/2012	22.17	23.32	1119.61	1118.46	1.15

MW-800					
Surface Elevation (ft.)		1145.25			
Top of Casing Elevation (ft.)		1145.08			
Top of Screen Elevation (ft)		1128			
Bottom of Screen Elevation (ft)		1118			
Meas. Date	DTF (ft)	DTW (ft)	TOF (ft)	GW Elev (ft)	PT (ft)
4/27/2005		FP			
10/25/2005		FP			
4/26/2006		FP			
10/24/2006		FP			
8/7/2008		FP			
11/12/2008		FP			
2/25/2009		FP			
5/21/2009		FP			
7/22/2010	23.18	24.08	1118.6	1117.7	0.9
1/6/2012					
4/4/2012	23.88	24.4	1117.9	1117.38	0.52

Wells without LNAPL

MW-300			
Surface Elevation (ft.)		1142	
Top of Casing Elevation (ft.)		1140.88	
Top of Screen Elevation (ft)		1132	
Bottom of Screen Elevation (ft)		1122	
Meas. Date	DTW (ft)	GW Elev (ft)	
4/27/2005	15.85	1125.03	
10/25/2005	13.93	1126.95	
4/26/2006	13.97	1126.91	
10/24/2006	16.07	1124.81	
8/7/2008	13.61	1127.27	
11/12/2008	14.85	1126.03	
2/25/2009	17.01	1123.87	
5/21/2009	15.2	1125.68	
7/22/2010	12.81	1128.07	
1/6/2012	NM	NM	
4/4/2012	15.17	1125.71	

MW-500			
Surface Elevation (ft.)		1140	
Top of Casing Elevation (ft.)		1139.93	
Top of Screen Elevation (ft)		1130	
Bottom of Screen Elevation (ft)		1120	
Meas. Date	DTW (ft)	GW Elev (ft)	
4/27/2005	15.05	1124.88	
10/25/2005	12.9	1127.03	
4/26/2006	13.05	1126.88	
10/24/2006	15.27	1124.66	
8/7/2008	12.33	1127.6	
11/12/2008	14.4	1125.53	
2/25/2009	15.97	1123.96	
5/21/2009	15.17	1124.76	
7/22/2010	12.15	1127.78	
1/6/2012	NM	NM	
4/4/2012	13.7	1126.23	

MW-600		
Surface Elevation (ft.)		1140.5
Top of Casing Elevation (ft.)		1140.39
Top of Screen Elevation (ft)		1129.5
Bottom of Screen Elevation (ft)		1119.5
Meas. Date	DTW (ft)	GW Elev (ft)
4/27/2005	16.08	1124.31
10/25/2005	14.91	1125.48
4/26/2006	15.13	1125.26
10/24/2006	15.77	1124.62
8/7/2008	14.32	1126.07
11/12/2008	15.26	1125.13
2/25/2009	16.98	1123.41
5/21/2009	16.64	1123.75
7/22/2010	14.88	1125.51
1/6/2012	NM	NM
4/4/2012	16.21	1124.18

MW-700		
Surface Elevation (ft.)		1142.5
Top of Casing Elevation (ft.)		1141.97
Top of Screen Elevation (ft)		1129
Bottom of Screen Elevation (ft)		1119
Meas. Date	DTW (ft)	GW Elev (ft)
4/27/2005	18.51	1123.46
10/25/2005	17.06	1124.91
4/26/2006	17.81	1124.16
10/24/2006	18.2	1123.77
8/7/2008	16.7	1125.27
11/12/2008	17.62	1124.35
2/25/2009	19.41	1122.56
5/21/2009	18.9	1123.07
7/22/2010	17.54	1124.43
1/6/2012	18.35	1123.62
4/4/2012	18.57	1123.4

MW-700A		
Surface Elevation (ft.)		1142.5
Top of Casing Elevation (ft.)		1142.07
Top of Screen Elevation (ft)		1098
Bottom of Screen Elevation (ft)		1093
Meas. Date	DTW (ft)	GW Elev (ft)
1/6/2012	21.32	1120.75
4/4/2012	20.85	1121.22

MW-700B		
Surface Elevation (ft.)		1,142.50
Top of Casing Elevation (ft.)		1,142.17
Top of Screen Elevation (ft)		1,082.00
Bottom of Screen Elevation (ft)		1,077.00
Meas. Date	DTW (ft)	GW Elev (ft)
1/6/2012	21.08	1121.09
4/4/2012	21.07	1121.1

MW-900		
Surface Elevation (ft.)		1147.5
Top of Casing Elevation (ft.)		1147.22
Top of Screen Elevation (ft)		1125.5
Bottom of Screen Elevation (ft)		1110.5
Meas. Date	DTW (ft)	GW Elev (ft)
4/27/2005	25.87	1121.35
10/25/2005	24.8	1122.42
4/26/2006	24.93	1122.29
10/24/2006	25.33	1121.89
8/7/2008	23.88	1123.34
11/12/2008	NM	NM
2/25/2009	NM	NM
5/21/2009	26.22	1121
7/22/2010	24.84	1122.38
1/6/2012	NM	NM
4/4/2012	25.8	1121.42

MW-1000		
Surface Elevation (ft.)		1136
Top of Casing Elevation (ft.)		1138.12
Top of Screen Elevation (ft)		1131
Bottom of Screen Elevation (ft)		1121
Meas. Date	DTW (ft)	GW Elev (ft)
4/27/2005	16.81	1121.31
10/25/2005	15.88	1122.24
4/26/2006	16.2	1121.92
10/24/2006	16.83	1121.29
8/7/2008	16.09	1122.03
11/12/2008	16.75	1121.37
2/25/2009	17.18	1120.94
5/21/2009	DRY	DRY
7/22/2010	15.99	1122.13
1/6/2012	NM	NM
4/4/2012	DRY	DRY

MW-1100		
Surface Elevation (ft.)		1136
Top of Casing Elevation (ft.)		1138.69
Top of Screen Elevation (ft)		1131
Bottom of Screen Elevation (ft)		1121
Meas. Date	DTW (ft)	GW Elev (ft)
4/27/2005	NM	NM
10/25/2005	NM	NM
4/26/2006	NM	NM
10/24/2006	NM	NM
8/7/2008	10.22	1128.47
11/12/2008	NM	NM
2/25/2009	16.82	1121.87
5/21/2009	10.99	1127.7
7/22/2010	7.42	1131.27
1/6/2012	NM	NM
4/4/2012	16.07	1122.62

DTF - depth to top of fluid (TOF)
DTW - depth to ground water
TOF - top of fluid in well
PT - product thickness measured with interface probe

TABLE 5 (Page 1 of 2)
Groundwater Elevation Data
Doug's Tire
Ladysmith, Wisconsin

WELL ID	MW-1		MW-2		MW-3		MW-4		MW-5***		MW-6		MW-7		EX-1		EX-2		RMW-5	
Top of Casing (TOC)	95.74		98.99		97.95		98.28		98.63		97.08		98.18		96.45		96.79		NM	
Depth to Bottom	49.37		29.84		28.52		34.84		29.26		32.42		31.71		31.80		31.20		25.92	
Depth *(meas. Sept. '12)*	50		30		28.5		32		30						29		31			
Top of Screen	56.37		79.15		79.43		73.44		79.37		74.66		76.47		74.65		75.59		NM	
Date	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
3/13/1998	22.66	73.08	25.56	73.43	25.51	72.44	25.31	72.97	22.61	76.02	24.39	72.69	24.27	73.91	23.42	73.03	22.66	74.13		NM
4/21/1998	21.98	73.76	24.25	74.74	23.68	74.27	24.12	74.16	22.48	76.15	24.92	72.16	23.58	74.60	23.52	72.93	23.01	73.78		NM
Top of Casing[*,2](TOC)	99.50		102.82		101.72		102.06		103.19		100.86		101.96		100.26		100.56		96.93	
Top of Screen[*,2]	60.13		82.98		83.20		77.22		83.93		78.44		80.25		78.46		79.36		81.01	
Ground Surface Elevation[*]	100.15		102.89		102.00		102.44		103.53		101.26		102.56		101.63		101.29		97.08	
12/14/2000	23.13	76.37	24.64	78.18	**26.98**	**74.74**	24.86	77.20	22.68	79.73	**25.08**	**75.78**	**26.20**	**75.76**	**25.84**	**74.42**	**25.43**	**75.13**	NM	NM
4/5/2001	23.16	76.34	25.64	77.18	**26.24**	**75.48**	25.56	76.50	23.48	78.93	**24.87**	**75.99**	**26.48**	**75.48**	**25.30**	**74.96**	NM	NM	NM	NM
7/26/2001	21.27	78.23	22.27	80.55	**24.31**	**77.41**	22.26	79.80			**23.39**	**77.47**	**23.08**	**78.88**	**23.26**	**77.00**	**23.37**	**77.19**	NM	NM
3/6/2002	22.99	76.51	24.41	78.41	**26.59**	**75.13**	24.59	77.47			**24.73**	**76.13**	**26.08**	**75.88**	**23.39**	**76.87**	**25.26**	**75.30**	NM	NM
7/25/2002	20.95	78.55	21.95	80.87	**23.41**	**78.31**	22.23	79.83			**20.60**	**80.26**	**24.10**	**77.86**	**22.08**	**78.18**	**23.05**	**77.51**	NM	NM
11/3/2002	20.38	79.12	NM	NM	**22.34**	**79.38**	NM	NM	Could not locate		NM	NM	NM	NM	**19.46**	**80.80**	**22.61**	**77.95**	NM	NM
11/12/2002	NM	NM	NM	NM	NM	NM	NM	NM			NM	NM	NM	NM	**19.64**	**80.62**	**22.92**	**77.64**	NM	NM
5/6/2003	21.96	77.54	23.75	79.07	**24.31**	**77.41**	23.91	78.15			**23.59**	**77.27**	23.35	78.61	**22.92**	**77.34**	**21.72**	**78.84**	15.13	81.80
8/12/2003	21.83	77.67	22.39	80.43	**24.53**	**77.19**	22.95	79.11			**21.51**	**79.35**	23.49	78.47	**20.95**	**79.31**	**22.14**	**78.42**	13.86	83.07
11/18/2003	22.38	77.12	23.21	79.61	**26.03**	**75.69**	24.00	78.06			**24.27**	**76.59**	24.16	77.80	**22.94**	**77.32**	**22.81**	**77.75**	15.60	81.33
5/11/2004	22.22	77.28	24.42	78.40	**24.34**	**77.38**	24.62	77.44	23.36	79.83	**23.64**	**77.22**	23.59	78.37	**22.99**	**77.27**	**22.19**	**78.37**	15.28	81.65
8/13/2004	21.66	77.84	22.73	80.09	**23.66**	**78.06**	23.04	79.02	22.42	80.77	**21.24**	**79.62**	23.16	78.80	**21.38**	**78.88**	**21.82**	**78.74**	14.08	82.85
11/16/2004	22.04	77.46	23.23	79.59	NM	NM	23.80	78.26	22.43	80.76	NM	NM	21.17	80.79	NM	NM	NM	NM	14.68	82.25
6/7/2005	22.71	76.79	24.62	78.20	**25.07**	**76.65**	24.87	77.19	23.51	79.68	**23.93**	**76.93**	24.06	77.90	**23.79**	**76.47**	**22.69**	**77.87**	16.00	80.93
1/31/2006	22.52	76.98	24.41	78.41	25.60	**76.12**	24.54	77.52	23.14	80.05	23.59	**77.27**	24.31	77.65	NM	NM	NM	NM	16.18	80.75
6/20/2006	**23.06**	**76.44**	23.85	78.97	**24.69**	**77.03**	24.11	77.95	23.10	80.09	**23.70**	**77.16**	23.83	78.13	22.15	**78.11**	22.91	**77.65**	15.27	81.66
1/22/2007	**23.84**	**75.66**	24.90	77.92	**24.10**	**77.62**	25.68	76.38	24.10	79.09	**24.11**	**76.75**	24.92	77.04	24.34	**75.92**	24.17	**76.39**		
7/10/2007	**23.20**	**76.30**	24.96	77.86	**25.67**	**76.05**	25.29	76.77	23.80	79.39	**23.20**	**77.66**	24.39	77.57	21.60	**78.66**	23.15	**77.41**		
9/14/2007	**23.10**	**76.40**	24.97	77.85	**25.84**	**75.88**	25.24	76.82	23.60	79.59	**23.25**	**77.61**	24.46	77.50	23.00	**77.26**	23.23	**77.33**		
1/10/2007	22.91	76.59	24.28	78.54	**25.73**	**75.99**	24.49	77.57	23.06	80.13	**NM**		24.40	77.56	20.54	**79.72**	24.18	**76.38**		
5/28/2008	22.03	77.47	24.11	78.71	**23.75**	**77.97**	23.89	78.17	23.20	79.99	**23.28**	**77.58**	23.38	78.58	21.39	**78.87**	22.06	**78.50**		
12/5/2008	NM		NM		NM		NM		25.51	77.68	NM		NM		NM		NM			
1/21/2009	23.53	75.97	24.71	78.11	**26.59**	**75.13**	24.82	77.24	23.52	79.67	**24.24**	**76.62**	25.21	76.75	22.50	**77.76**	25.21	**75.35**		
5/19/2009	23.18	76.32	25.32	77.50	**24.27**	**77.45**	25.39	76.67	24.08	79.11	**23.36**	**77.50**	24.53	77.43	22.40	**77.86**	23.74	**76.82**		Destroyed
3/16/2010	23.48	76.02	25.86	76.96	**25.57**	**76.15**	25.86	76.20	24.09	79.10	**23.73**	**77.13**	24.79	77.17	18.99	**81.27**	23.55	**77.01**		
1/16/2012	22.89	76.61	23.70	79.12	**NM**		24.17	77.89	22.81	80.38	**NM**		24.61	77.35	NM		NM			
4/4/2012	24.09	75.41	24.81	78.01	**24.95**	**76.77**	24.91	77.15	23.30	79.89	**24.20**	**76.66**	24.33	77.63	22.85	**77.41**	NM			
Re-survey Nov14, '12[3]		1142.95		1146.10		**1144.92**		1145.70		1146.35		**1144.16**		1145.26		**1143.70**		**1144.02**		
9/10/2012	**23.21**	**1119.74**	23.80	1122.30	**24.50**	1120.42	24.70	1121.00	22.93	1123.42	**nm**		**nm**		**20.95**	**1122.75**	**23.30**	**1120.72**		
7/1/2013															**22.00**					

Notes:

Elevations are relative to an onsite benchmark
All depths are reported in feet
Bold - Indicates free product was observed in the well
77.99 - **PVC cut down due to frost-heaving. Needs to be resurveyed.**

NM - Not measured
TOC - Top-of-casing

* - On 12/14/00 TOCs and ground surface elevations from all wells were resurveyed (surveys prior to 12/14/00 are in relation to a different benchmark?).
** - Depth to water not accessible due to postion of free product pump in well
*** - MW-5 TOC was readjusted to current grade; the elevation was 102.41 prior to adjustment and 103.19 after.
[1]- On July 26, 2001 TOCs and groundsurface elevations were surveyed. Elevations were tied into the survey from 12/14/00.
[2]- On November 16, 2004 the TOC elevations of EX-3 through EX-7 and RMW-5 were surveyed.
[3]- On November 14, 2012 TOC's resurveyed relative to REI benchmarks (after PVC cut-downs of Sept. '12)

TABLE 5 (Page 2 of 2)
Groundwater Elevation Data
Doug's Tire
Ladysmith, Wisconsin

WELL ID	MW-100		MW-101		MW-102		MW-103		PZ-100		EX-3		EX-4		EX-5		EX-6		EX-7	
Top of Casing[1,2](TOC)	102.92		104.29		103.57		99.89		99.59		101.21		101.55		101.35		100.17		99.56	
Ground Surface Elevation[1]	103.28		104.50		103.88		100.18		99.85		101.4		101.7		101.5		100.3		99.7	
Depth *(meas. Sept. '12)*	28		34		DAMAGED		29		67		34.5		32		33		23 (?)		34.5	
Depth to Bottom	28.26		33.70		28.86		28.92		67.35		35		35		35		35		35	
Top of Screen[1,2]	89.66		85.59		89.71		85.97		37.24		86.21		86.55		86.35		85.17		84.56	
Date	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
12/14/2000	NOT INSTALLED																			
4/5/2001																				
7/26/2001	19.76	83.16	23.16	81.13	23.24	80.33	**22.26**	**77.63**	22.94	76.65										
3/6/2002	21.73	81.19	26.13	78.16	25.12	78.45	**25.14**	**74.75**	24.73	74.86										
7/25/2002	19.00	83.92	23.04	81.25	23.10	80.47	**22.81**	**77.08**	22.81	76.78										
11/3/2002	NM	NM	NM	NM	NM	NM	**22.00**	**77.89**	NM	NM	**22.80**	**78.41**	**23.37**	**78.18**	**24.50**	**76.85**	NM	NM	NM	NM
11/12/2002	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	**22.52**	**78.69**	**24.06**	**77.49**	**24.21**	**77.14**	**22.34**	**77.83**	**19.54**	**80.02**
5/6/2003	20.49	82.43	25.20	79.09	NM	NM	**23.54**	**76.35**	23.93	75.66	**24.17**	**77.04**	**22.72**	**78.83**	**24.92**	**76.43**	**22.72**	**77.45**	**	NM
8/12/2003	20.51	82.41	24.10	80.19	23.41	80.16	**23.66**	**76.23**	23.69	75.90	**23.83**	**77.38**	**22.50**	**79.05**	**25.17**	**76.18**	**20.96**	**79.21**	**20.60**	**78.96**
11/18/2003	21.64	81.28	25.38	78.91	23.18	80.39	**24.28**	**75.61**	24.40	75.19	**24.40**	**76.81**	**24.52**	**77.03**	**25.61**	**75.74**	**22.27**	**77.90**	**21.80**	**77.76**
5/11/2004	21.00	81.92	25.63	78.66	24.68	78.89	**23.55**	**76.34**	24.31	75.28	**23.45**	**77.76**	**24.18**	**77.37**	**24.69**	**76.66**	NM	NM	**21.85**	**77.71**
8/13/2004	20.37	82.55	NM	NM	23.01	80.56	**23.20**	**76.69**	23.63	75.96	**22.34**	**78.87**	**23.16**	**78.39**	**24.44**	**76.91**	**20.24**	**79.93**	**20.57**	**78.99**
11/16/2004	19.75	83.17	24.91	79.38	22.72	80.85	NM	NM	24.19	75.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/7/2005	21.47	81.45	26.11	78.18	19.39	84.18	23.97	75.92	24.61	74.98	**24.55**	**76.66**	NM	NM	NM	NM	NM	NM	NM	NM
1/31/2006	22.38	80.54	25.94	78.35	24.99	78.58	**NM**	**NM**	24.52	75.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/20/2006	22.12	80.80	25.16	79.13	24.41	79.16	**23.65**	**76.24**	25.29	74.30	**23.96**	**77.25**	**24.64**	**76.91**	**25.54**	**75.81**	**22.97**	**77.20**	**21.85**	**77.71**
1/22/2007	23.11	79.81	27.79	76.50	25.54	78.03	**23.98**	**75.91**	26.51	73.08	**25.86**	**75.35**	**26.41**	**75.14**	**27.01**	**74.34**	**24.62**	**75.55**	**23.61**	**75.95**
7/10/2007	22.07	80.85	26.50	77.79	22.62	80.95	**24.52**	**75.37**	25.10	74.49	**24.96**	**76.25**	**25.51**	**76.04**	**25.30**	**76.05**	**22.31**	**77.86**	**23.96**	**75.60**
9/14/2007	22.17	80.75	26.44	77.85	24.30	79.27	**24.88**	**75.01**	25.21	74.38	**25.18**	**76.03**	**24.46**	**77.09**	**25.49**	**75.86**	**22.58**	**77.59**	**24.49**	**75.07**
1/10/2008	21.76	81.16	25.64	78.65	NM	NM	**24.33**	**75.56**	**24.92**	**74.67**	**24.87**	**76.34**	**25.00**	**76.55**	**25.60**	**75.75**	**23.27**	**76.90**	**22.10**	**77.46**
5/28/2008	20.76	82.16	24.54	79.75	23.82	79.75	**23.09**	**76.80**	**24.01**	**75.58**	**NM**		**NM**		**24.50**	**76.85**	**22.15**	**78.02**	**21.35**	**78.21**
1/21/2009	NM		26.49	77.80	25.32	78.25	**25.02**	**74.87**	**25.69**	**73.90**	**NM**		**NM**		**NM**		**NM**		**NM**	
5/19/2009	22.82	80.10	26.73	77.56	24.79	78.78	**24.40**	**75.49**	**25.69**	**73.90**	**NM**		**NM**		**25.28**	**76.07**	**24.39**	**75.78**	**25.01**	**74.55**
3/16/2010	21.55	81.37	27.23	77.06	NM		**25.49**	**74.40**	**25.42**	**74.17**	**NM**		**NM**		**NM**		**NM**		**NM**	
1/16/2012	22.43	80.49	25.77	78.52	NM		**NM**		25.64	73.95	**NM**		**NM**		**NM**		**NM**		**NM**	
4/12/2012	22.48	80.44	26.30	77.99	NM		**24.62**	**75.27**	24.90	74.69	**NM**		**NM**		**NM**		**NM**		**NM**	
Re-survey Nov. 14,2012[3]		1146.17		1147.43		1147.14		**1143.12**		**1142.93**		**1144.67**		**1144.85**		**1144.75**		**1142.97**		**1142.97**
9/10/2012	22.18	1123.99	25.55	1123.63	damaged		**21.90**	**1121.00**	**24.76**	**1118.17**	**23.50**	**1121.17**	24.41	**1120.44**	**23.96**	**1120.79**	silted in		21.85	**1121.12**

Notes:

Elevations are relative to an onsite benchmark
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Bold - Indicates free product was observed in the well
77.99 - **PVC cut down due to frost-heaving. Needs to be resurveyed.**

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** - Depth to water not accessible due to postion of free product pump in well

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[2]- On November 16, 2004 the TOC elevations of EX-3 through EX-7 and RMW-5 were surveyed.

[3]- On November 14, 2012 TOC's resurveyed relative to REI benchmarks (after PVC cut-downs of Sept. '12)

Rauhut's actual MW-9 is located in the Hardee's parking lot; the well we have labeled as RMW-9 is actually Rauhut's MW-5 !!!

FIGURES

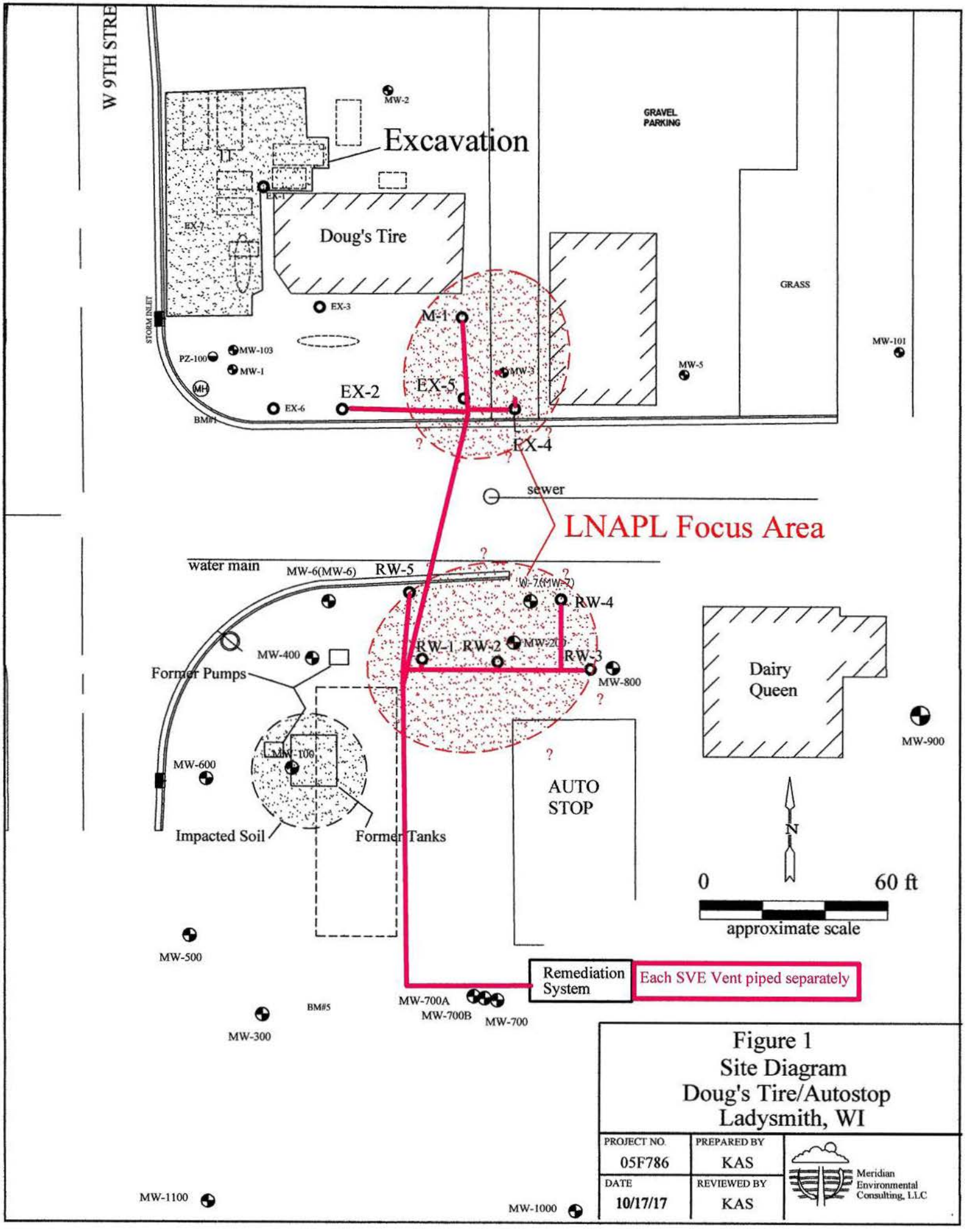
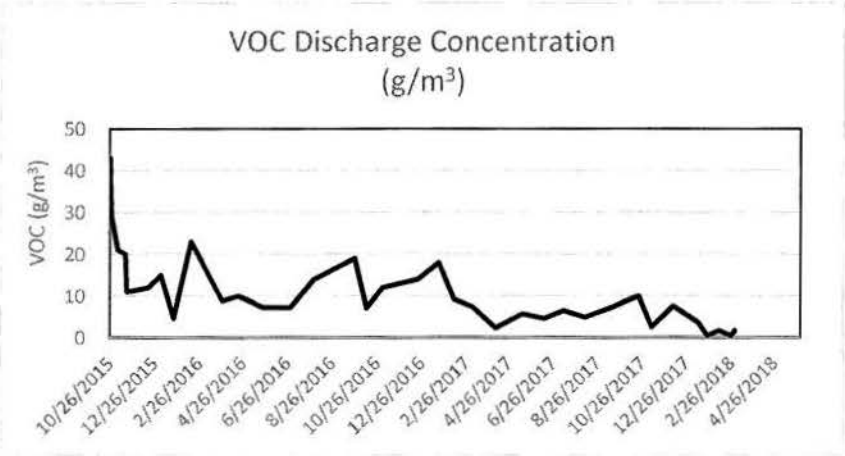


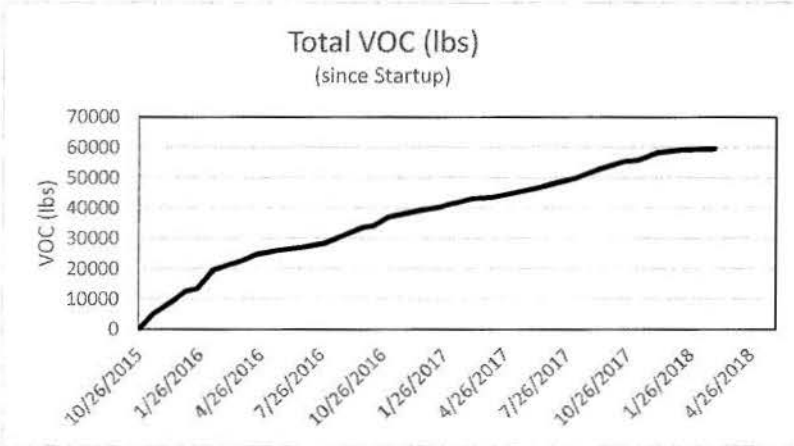
Figure 1
Site Diagram
Doug's Tire/Autostop
Ladysmith, WI

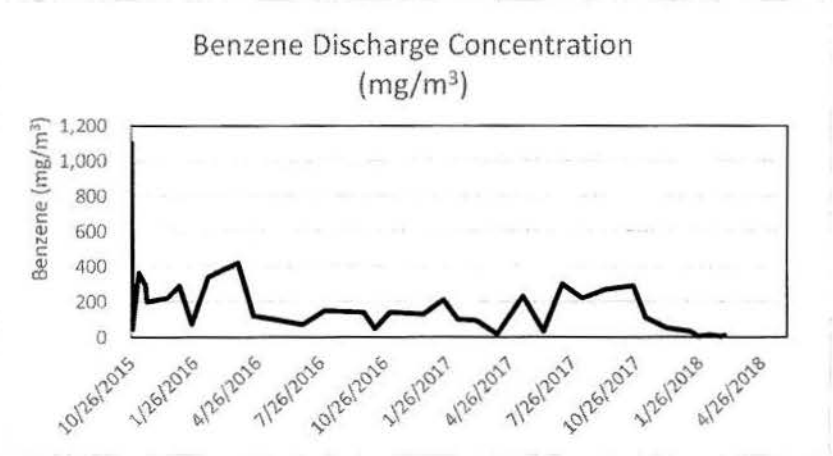
PROJECT NO.	PREPARED BY
05F786	KAS
DATE	REVIEWED BY
10/17/17	KAS

Meridian Environmental Consulting, LLC

Figure 2: SVE Discharge Data
Autostop/Doug's
Ladysmith, Wisconsin







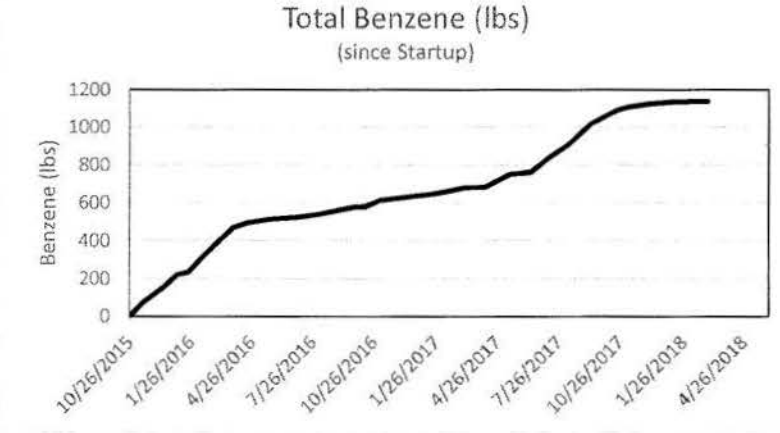
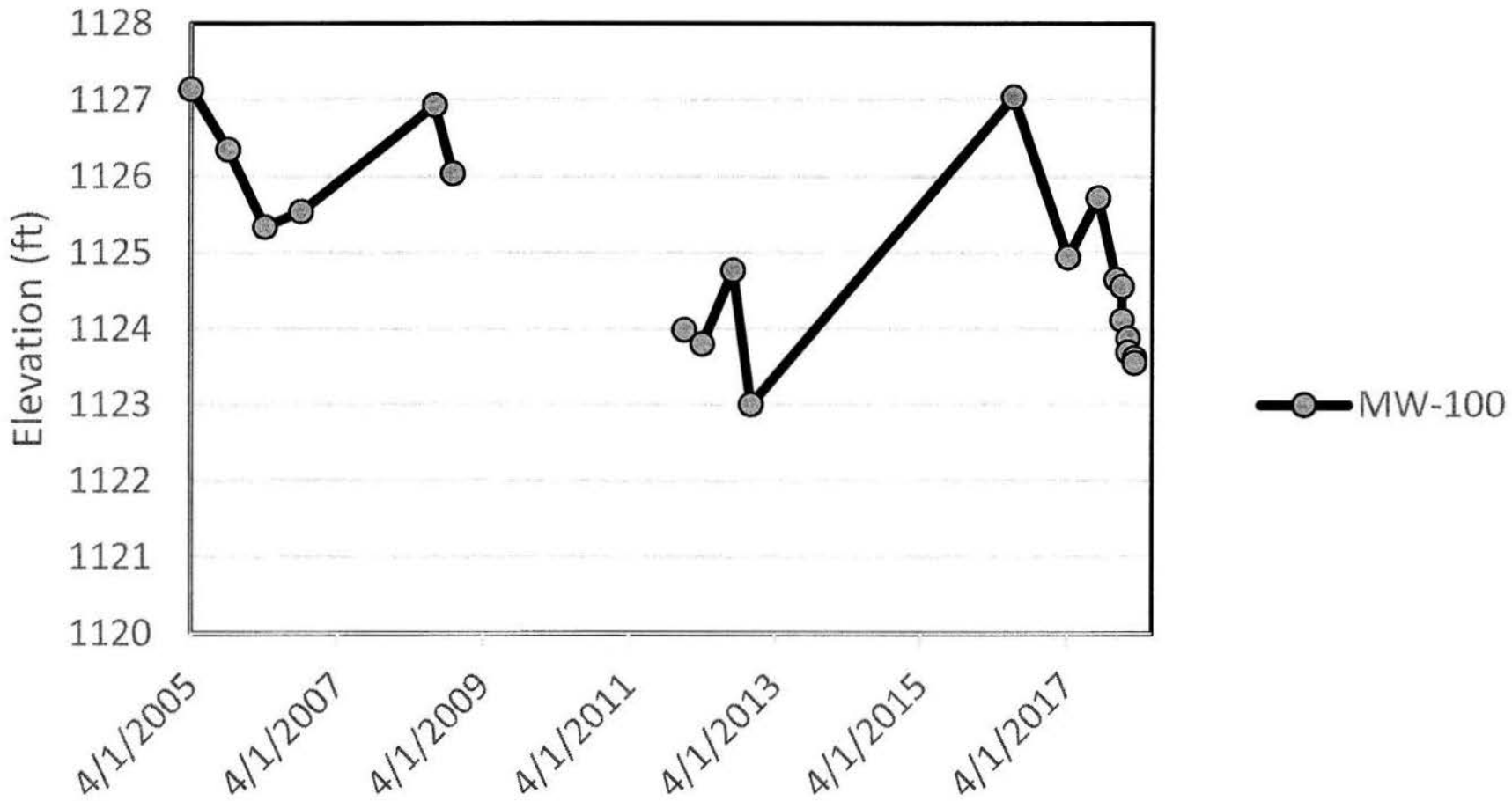


Figure 3: MW-100 Hydrograph



ATTACHMENT A

Lab Report (results page only)

Client: Meridian Environmental Consulting LLC
Project/Site: Doug's Autostop, Benzene & Gasoline

TestAmerica Job ID: 310-117316-1

Client Sample ID: SVE Exhaust
Date Collected: 10/21/17 00:00
Date Received: 10/25/17 09:50
Sample Air Volume: 1.01 L

Lab Sample ID: 310-117316-1
Matrix: Air
Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

4

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	290	290	91		11	11/03/17 12:13	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	10000	10000			290	11/03/17 12:14	1	JCM

Client: Meridian Environmental Consulting LLC
Project/Site: Autostop, Dave's, SVE Exhaust

TestAmerica Job ID: 310-118575-1

Client Sample ID: SVE Exhaust
Date Collected: 11/08/17 00:00
Date Received: 11/10/17 11:50
Sample Air Volume: 1.02 L

Lab Sample ID: 310-118575-1
Matrix: Air
Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

4

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	110	110	35		11	11/17/17 12:00	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	2700	2600			59	11/17/17 12:00	1	JCM

Client Sample Results

Client: Meridian Environmental Consulting LLC
Project/Site: Autostop/Dave's, SVE Exhaust

TestAmerica Job ID: 310-120648-1

Client Sample ID: SVE Exhaust
Date Collected: 12/08/17 00:00
Date Received: 12/13/17 09:43
Sample Air Volume: 1.05 L

Lab Sample ID: 310-120648-1
Matrix: Air
Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Prepared	Analyzed	Dil Fac
Benzene	55	53	17		11		12/20/17 13:31	1

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Prepared	Analyzed	Dil Fac
Gasoline	8000	7600			290		12/20/17 13:58	1

Client: Meridian Environmental Consulting LLC
Project/Site: Doug's, Autostop, SVE Exhaust

TestAmerica Job ID: 310-122681-1

Client Sample ID: SVE Exhaust
Date Collected: 01/12/18 00:00
Date Received: 01/18/18 11:30
Sample Air Volume: 1.05 L

Lab Sample ID: 310-122681-1
Matrix: Air
Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	34	32	10		11	01/26/18 11:57	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	3700	3500			150	01/30/18 15:13	1	JCM

Client: Meridian Environmental Consulting LLC
Project/Site: Ladysmith, SVE Exhaust

TestAmerica Job ID: 310-123165-1

Client Sample ID: SVE Exhaust
Date Collected: 01/24/18 00:00
Date Received: 01/29/18 15:14
Sample Air Volume: 1.05 L

Lab Sample ID: 310-123165-1
Matrix: Air
Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	<11	<10	<3.2		11	02/08/18 13:39	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	440	420			29	02/12/18 12:31	1	JCM

Client: Meridian Environmental Consulting LLC
Project/Site: Autostop, Doug's, SVE Exhaust

TestAmerica Job ID: 310-124106-1

Client Sample ID: SVE Exhaust
Date Collected: 02/09/18 00:00
Date Received: 02/14/18 09:17
Sample Air Volume: 1.03 L

Lab Sample ID: 310-124106-1
Matrix: Air
Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	13	12	3.9		11	02/22/18 13:09	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	1700	1700			29	02/23/18 09:29	1	JCM

Client: Meridian Environmental Consulting LLC
Project/Site: Autostop, Doug's, SVE Exhaust

TestAmerica Job ID: 310-125230-1

Client Sample ID: SVE Exhaust — Lab Sample ID: 310-125230-1
Date Collected: 02/26/18 00:00 — Matrix: Air
Date Received: 03/07/18 09:35
Sample Air Volume: 1.07 L — Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	<11	<9.9	<3.1		11	03/14/18 11:49	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	510	480			29	03/15/18 11:46	1	JCM

Client Sample ID: SVE Exhaust — Lab Sample ID: 310-125230-2
Date Collected: 03/03/18 00:00 — Matrix: Air
Date Received: 03/07/18 09:35
Sample Air Volume: 1.07 L — Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	11	10	3.2		11	03/14/18 11:49	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	1800	1700			29	03/15/18 11:46	1	JCM