Meridian Environmental Consulting, LLC

September 24, 2017

Aaron Kent
Wisconsin Department of Natural Resources
1300 West Clairemont Avenue
Eau Claire, Wisconsin 54701

Subject: **Change Order: Additional Site Investigation**
Julson Store (former)
W125 County Road Z
Mondovi, Wisconsin
PECFA No. 54755-9999-25
DNR BRRTS No. 03-06-001296
Meridian No. 05F823

Dear Aaron:

This letter provides a Change Order to complete additional site investigation activities including:

- Conduct a Potable Well Field Reconnaissance to locate nearby water supply wells and obtain information regarding same
- Install soil borings (and sampling) to define extent of impacted soil in tank basin
- Install 5 monitoring wells and one piezometer
- Complete Initial Site Survey (site features and MW elevation & locations)
- Collect ground water samples twice (3 months apart)
- Conduct hydraulic conductivity testing to characterize aquifer
- Submit results of this work in report

A Cost Estimate for this work using the PECFA Usual and Customary Cost Schedule is included.

The remainder of this Change Order describes the proposed work.

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

BACKGROUND INFORMATION

The reader is referred to the *Soil and Ground Water Investigation report* dated July 20, 2017 for more information regarding the site and work completed to date. Figure 1 and Tables 1, 2, and 3 are included for reference.

In that report, Meridian recommended a Remedial Excavation of the impacted soils in the former tank basin be completed this fall. Additional monitoring wells and ground water sampling would be installed after the excavation. The site would then be monitored to Closure with GIS Registry for Soil and Ground Water.

DNR disagreed with this approach and requested that more site investigation be completed before identifying a remedial option.

PROPOSED SCOPE OF WORK

Potable Well Field Reconnaissance

There is an onsite water supply well. There are also several residences located adjacent to the site. We will investigate whether these adjacent properties have water supply wells and obtain as much information as possible about the well construction, location, and use.

Install more soil borings to determine the extent of impacted soil

The soil borings GP-1 and GP-6 encountered petroleum impacted soils in the former tank basin location. We recommend installing four additional soil borings to define the extent of the impacted soil. Figure 2 illustrates the location of the proposed soil borings.

The borings will be installed at the same time as the monitoring wells using the drill rig (split-spoon). The borings will be installed to a depth of 16 feet. Soil samples will be collected at 2 ft intervals (i.e., 2-4, 4-6, 6-8, etc.). The samples will be analyzed for PVOC+Naphthalene.

Install five monitoring wells and one piezometer to define the extent of impacted ground water

The temporary monitoring wells (T-1, T-3, T-4) will be abandoned.

Five monitoring wells (2-inch diameter) will be installed in the locations shown in Figure 3. The monitoring wells will be screened from 5 – 15 feet below grade (some variation may be determined in the field).

A piezometer (screened 20 – 25 ft depth interval) will be installed downgradient of the site (Figure 3) to measure the vertical ground water gradient and vertical extent of impacted ground water. Sandstone bedrock may prevent installation of the piezometer using hollow-stem augers. If so, the piezometer will not be installed at this time.

Ground Water Sampling

The monitoring wells and piezometer will be sampled twice (3 months apart). The samples will be analyzed for PVOC+Naphthalene.

The onsite monitoring well will also be sampled twice. Other water supply wells may also be sampled depending upon location.

Complete Initial Site Survey

An initial survey to collect site feature location data as well as monitoring well location and elevation data will be completed. Other site features (e.g., creek, bridge, fence, roadway, etc.) will be included.

The wells will be surveyed to USGS datum (if benchmark is available).

Hydraulic Conductivity measurements

After the monitoring wells are installed, the hydraulic conductivity will be measured with slug tests. We recommend three monitoring wells and the piezometer be tested.

Report

A report will be prepared summarizing and interpreting the results of the work completed. This report will include our recommendations for further work to move this project to Closure.

COST

Enclosed is a PECFA Usual and Customary Cost Schedule for the proposed work.

We will proceed upon receipt of written authorization.

Sincerely,
MERIDIAN ENVIRONMENTAL CONSULTING, LLC

Kenneth Shimko, PG
Project Manager

Usual and Customary Standardized Invoice #22
July 2017 - December 2017

RR-083A

PECFA #: 54755-9999-25
BRRT's #: 03-06-001296
Site Name: Julson Store (former)
Site Address: Mondovi

Vendor Name: Change Order
Invoice #: Change Order
Invoice Date: September 0217
Check #: Change Order

U&C Total $ 19,279.70
Variance to U&C Total $ -
Grand Total $ 19,279.70

TASK	TASK DESCRIPTION	SERVICES	ACTIVITY CODE	ACTIVITY REFERENCE CODE DESCRIPTION	UNIT		MAX UNIT COST	UNITS		TOTAL MAX
Abandon 3 temp wells, Install five monitoring wells (screen 5-15 ft), one piezometer (screen 20-25 ft), four soil borings (16 ft)(sample every 2 ft = 7 samples/boring x 4 borings = 28 soil samples), GW sampling (5 MWs, 1 Pz, onsite well x 2 events = 14 samples), Initial Site Survey, Potable Well Field Recon, Hydraulic Conductivity tests (4), dispose investigative waste (soil cuttings and purge water)(analzye one soil sample for waste profile TCLP-Benzene)										
1	GW Sampling		GS05	Sample Collection	Well	$	72.45	14	$	1,014.30
1	GW Sampling		GS25	Primary Mob/Demob	Site	$	628.11	2	$	1,256.22
1	GW Sampling		GS30	Temporary Well Abandonment	Well	$	26.99	3	$	80.97
4	Waste Disposal	Consultant	WD05	Consultant Coordination (1-drill cuttings, 1-purge water)	Site	$	137.13	2	$	274.26
4	Waste Disposal	Commodity	WD10	GW Sample and/or Purge	Drum	$	42.11	3	$	126.33
4	Waste Disposal	Commodity	WD15	Drill Cuttings	Drum	$	108.15	8	$	865.20
4	Waste Disposal	Commodity	WD17	Landfill Environmental Fee (provide documentation)	ACTUAL COST				$	100.00
4	Waste Disposal	Commodity	WD25	Primary Mob/Demob (1-drill cuttings, 1-purge water)	Site	$	287.70	2	$	575.40
10	Initial Site Survey	Consultant	IS05	Coordination of Initial Site Survey (features + well elevations)	Survey	$	117.18	1	$	117.18
10	Initial Site Survey	Commodity	IS15	Initial Survey	Survey	$	1,171.70	1	$	1,171.70
11	Potable Well Field Reconnaissance		PWFR05	Potable Well Field Reconnaissance	Site	$	583.50	1	$	583.50
Drill/sample four 16 ft soil borings, five 15 ft monitoring wells, one piezometer (25 ft) . Soil-sample piezometer but not adjacent MW										
13.a	Drilling In Unconsolidated Soils - With Soil Sampling	Consultant	DR05	0 - 25 ft bgs **(4x16+4x15+25=149 ft of sampling)**	Ft	$	5.40	149	$	804.60
13.a	Drilling In Unconsolidated Soils - With Soil Sampling	Consultant	DR20	Primary Mob/Demob	Site	$	593.04	1	$	593.04
13.b	Drilling In Unconsolidated Soils - Without Soil And/Or GW Sampling	Consultant	DR25	Consultant Oversight **(MW adjacent to PZ)**	Ft	$	1.58	15	$	23.70
13.d	Drilling In Unconsolidated Soils - With Soil Sampling	Commodity	DR45	0 - 25 ft bgs **(4x16+4x15+25=149 ft of sampling)**	Ft	$	16.70	149	$	2,488.30
13.e	Drilling In Unconsolidated Soils - Without Soil And/Or GW Sampling	Commodity	DR60	Drilling in Unconsolidated Soils **(MW adjacent to PZ)**	Ft	$	11.97	15	$	179.55
Install five 15 ft MWs plus one 25 ft PZ = 100 ft. Abandon four 16 ft soil borings										
14	Monitoring Well Installation	Consultant	MWI05	0 - 25 ft bgs	Ft	$	3.89	100	$	389.00
14	Monitoring Well Installation	Commodity	MWI15	2 inch PVC Casing	Ft	$	16.70	100	$	1,670.00
14	Monitoring Well Installation	Commodity	MWI20	Well Development	Well	$	147.63	6	$	885.78
15	Misc. Drilling Activities & Supplies		MDT05	Drill Rig Mob/Demob	Mob/Demob	$	963.38	1	$	963.38
15	Misc. Drilling Activities & Supplies		MDT10	Well Cover/flushmount	Each	$	202.65	6	$	1,215.90
15	Misc. Drilling Activities & Supplies		MDT25	Commodity Service Provider Per Diem (drilling and direct push)	Person	$	203.28	2	$	406.56
15	Misc. Drilling Activities & Supplies		MDT35	Borehole Abandonment **(abandon four 16 ft soil borings = 64 ft)**	Foot	$	5.46	64	$	349.44
19	Hydraulic Conductivity Testing		HCT05	Hydraulic Conductivity Testing	Well	$	58.59	4	$	234.36
19	Hydraulic Conductivity Testing		HCT10	Primary Mob/Demob	Site	$	652.79	1	$	652.79
20	Soil Boring/Monitoring Well Permits		SBMWP05	Soil Boring/Monitoring Well Permit **(Buffalo County Hwy Dept)**	Permit	$	246.12	1	$	246.12
20	Soil Boring/Monitoring Well Permits		SBMWP10	Permit Fee (copy of permit & fee receipt required)	Permit Fee					
21	Access Agreements		AA05	Access Agreements	Property	$	401.94		$	-
31	Consultant Overnight Per Diem		COPD05	Overnight	Night	$	113.72	1	$	113.72
33	Schedule Of Laboratory Maximums	Commodity		Laboratory (see task 33 total on Lab Schedule)	Lab Schedule			43	$	1,516.62
36	Change Order Request		COR05	Change Order Request (cost cap exceedance requests)	Change Order	$	381.78	1	$	381.78
Variance										
Variance										

Usual and Customary Standardized Invoice #22
July 2017 - December 2017

RR-083A

			TOTAL LAB CHARGES	$1,516.62	TASK 33	43	$1,516.62	TASK 24	0	$	-

MATRIX	REF CODE	REIMBURSABLE ANALYTE	UNITS	MAX COST	SAMPLES	TOTAL	MAX COST	SAMPLES	TOTAL
AIR	A1	Benzene	SAMPLE	$ 44.94		$ -			
AIR	A2	BETX	SAMPLE	$ 49.46		$ -			
AIR	A3	GRO	SAMPLE	$ 46.10		$ -			
AIR	A4	VOC's	SAMPLE	$ 71.93		$ -			
WATER	W1	GRO/PVOC	SAMPLE	$ 29.19		$ -			
WATER	W2	PVOC	SAMPLE	$ 26.99		$ -			
WATER	W3	PVOC + 1,2 DCA	SAMPLE	$ 43.79		$ -			
WATER	W4	PVOC + Naphthalene	SAMPLE	$ 30.35	14	$ 424.90			
WATER	W5	VOC	SAMPLE	$ 71.93		$ -			
WATER	W6	PAH	SAMPLE	$ 72.98		$ -			
WATER	W7	Lead	SAMPLE	$ 12.39		$ -			
WATER	W8	Cadmium	SAMPLE	$ 13.55		$ -			
WATER	W9	Hardness	SAMPLE	$ 12.39		$ -			
WATER	W10	BOD, Total	SAMPLE	$ 23.63		$ -			
WATER	W11	Nitrate	SAMPLE	$ 11.24		$ -			
WATER	W12	Total Kjeldahl	SAMPLE	$ 20.27		$ -			
WATER	W13	Ammonia	SAMPLE	$ 16.91		$ -			
WATER	W14	Sulfate	SAMPLE	$ 10.19		$ -			
WATER	W15	Iron	SAMPLE	$ 10.19		$ -			
WATER	W16	Manganese	SAMPLE	$ 10.19		$ -			
WATER	W17	Alkalinity	SAMPLE	$ 10.19		$ -			
WATER	W18	methane	SAMPLE	$ 46.10		$ -			
WATER	W19	Phosphorous	SAMPLE	$ 18.06		$ -			
WATER	W20	VOC Method 524.2	SAMPLE	$ 176.30		$ -			
WATER	W21	EDB Method 504	SAMPLE	$ 95.45		$ -	MAX COST	SAMPLES	TOTAL
SOILS	S1	GRO	SAMPLE	$ 24.78		$ -	$ 24.78		$ -
SOILS	S2	DRO	SAMPLE	$ 30.35		$ -	$ 30.35		$ -
SOILS	S3	GRO/PVOC	SAMPLE	$ 28.14		$ -	$ 28.14		$ -
SOILS	S4	PVOC	SAMPLE	$ 25.83		$ -	$ 25.83		$ -
SOILS	S5	PVOC + 1,2 DCA + Naphthalene	SAMPLE	$ 49.46		$ -	$ 49.46		$ -
SOILS	S6	PVOC + Naphthalene	SAMPLE	$ 36.02	28	$ 1,008.56	$ 36.02		$ -
SOILS	S7	VOC	SAMPLE	$ 71.93		$ -	$ 71.93		$ -
SOILS	S8	SPLP Extraction VOC only	SAMPLE	$ 50.61		$ -	$ 50.61		$ -
SOILS	S9	PAH	SAMPLE	$ 72.98		$ -	$ 72.98		$ -
SOILS	S10	Lead	SAMPLE	$ 12.39		$ -	$ 12.39		$ -
SOILS	S11	Cadmium	SAMPLE	$ 14.60		$ -		TASK 24 TOTAL	$ -
SOILS	S12	Free Liquid	SAMPLE	$ 11.24		$ -			
SOILS	S13	Flash Point	SAMPLE	$ 25.83		$ -			
SOILS	S14	Grain Size - dry	SAMPLE	$ 42.74		$ -			
SOILS	S15	Grain Size - wet	SAMPLE	$ 57.33		$ -			
SOILS	S16	Bulk Density	SAMPLE	$ 13.55		$ -			
SOILS	S17	Permeability	SAMPLE	$ 41.58		$ -			
SOILS	S18	Nitrogen as Total Kjeldahl	SAMPLE	$ 20.27		$ -			
SOILS	S19	Nitrogen as Ammonia	SAMPLE	$ 16.91		$ -			
SOILS	S20	% Organic Matter	SAMPLE	$ 29.19		$ -			
SOILS	S21	TOC as NPOC	SAMPLE	$ 57.33		$ -			
SOILS	S22	Soil Moisture Content	SAMPLE	$ 6.83		$ -			
SOILS	S23	Air Filled Porosity	SAMPLE	$ 25.83		$ -			
SOILS	S24	% Total Solids	SAMPLE	$ 6.83		$ -			
SOILS	S25	Field Capacity	SAMPLE	$ 28.14		$ -			
SOILS	S26	TCLP Lead	SAMPLE	$ 83.16		$ -			
SOILS	S27	Cation Exchange (Ca, MG, & K)	SAMPLE	$ 26.99		$ -			
SOILS	S28	TCLP Cadmium	SAMPLE	$ 83.16		$ -			
SOILS	S29	TCLP Benzene	SAMPLE	$ 83.16	1	$ 83.16			
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	$ 561.33		$ -			
						TASK 33 TOTAL	$ 1,516.62		

Table 1: Soil Analytical Data

Julson Store (Former)
Dover Township/Buffalo County
Meridian No. 05F823

Sample	Benzene	Ethylbenzene	MTBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	Total TMB	m&p-Xylene	o-Xylene	Xylene (Total)
NTEDC	1600	8020	63800	5520	818000	219000	182000				260000
RCL-gw	5.1	1570	27	658.2	1107.2			1382			3960
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
1: 3-4	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
1: 7-8	**1880**	**58800**	**1520J**	**21100**	**5560**	**163000**	**121000**	**41700**	**189000**	**4160**	**193000**
1: 11-12	**4620**	**44700**	**1850**	**13200**	**11600**	**112000**	**83100**	**29300**	**143000**	**3500**	**146000**
1: 15-16	<25	**36.6**	<25	<25	<25	**33.2**	<25	<50	**109**	<25	109
2: 3-4	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
2: 7-8	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
2: 11-12	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
3: 3-4	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
3: 7-8	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
3: 11-12	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
4: 3-4	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
4: 7-8	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
4: 11-12	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
5: 3-4	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
5: 7-8	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
5: 11-12	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
6: 3-4	<25	<25	<25	<25	<25	<25	<25	<50	<50	<25	<75
6: 7-8	<500	**4990**	<500	**19400**	<500	**172000**	**128000**	**44200**	**27800**	**2830**	**30600**
6:10	<1000	**30200**	<1000	**42300**	<1000	**376000**	**282000**	**93800**	**145000**	**7750**	**153000**
6: 11-12	**26600**	**131000**	**6460**	**32900**	**415000**	**306000**	**228000**	**77800**	**418000**	**154000**	**572000**

1000 Concentration exceeds NTEDC (Not to exceed Direct Contact) and/or Soil - GW RCL (Residual Contaminant Level)

Table 2: Ground Water Analytical Data

Julson Store (Former)
Dover Township/Buffalo County
Meridian No. 05F823

Sample	Benzene	Ethylbenzene	MTBE	Naphthalene	Toluene	1,2,4-TMB	1,3,5-TMB	Total TMB	Xylene (Total)
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
NR140 ES	5	700	60	100	800			480	2000
NR140 PAL	0.5	140	12	10	160			96	400
T-1 (installed 6/12/17)									
* 6/15/2017	**3380**	**3650**	<97	**819**	**4500**	3810	1120	**4930**	**12100**
T-3 (installed 6/12/17)									
6/15/2017	<.4	**1.2**	<.48	<.42	<.39	<.42	<.42	<.42	**5**
T-4 (installed 6/12/17)									
6/15/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42	<1.2
Onsite Well (non-potable) (30 feet deep)									
6/15/2017	<.4	<.39	<.48	<.42	<.39	<.42	<.42	<.42	<1.2

100 Concentration exceeds NR140 ES (Enforcement Standard)

* 3 inches free product measured in T-1 (June 15, 2017)

Table 3: Ground Water Levels

Julson Store (Former)
Dover Township/Buffalo County
Meridian No. 05F823

T-1 (installed June 12, 2017 in GP-1)			T-3 (installed June 12, 2017 in GP-3)			T-4 (installed June 12, 2017 in GP-4)		
Surface Elevation		98	Surface Elevation		98	Surface Elevation		102
Top of Casing		100	Top of Casing		99.19	Top of Casing		102.9
Top of Screen		93	Top of Screen		92	Top of Screen		96
Bottom of Screen		83	Bottom of Screen		82	Bottom of Screen		86
Measurement Date	**DTW (ft)**	**GW Elev. (ft)**	**Measurement Date**	**DTW (ft)**	**GW Elev. (ft)**	**Measurement Date**	**DTW (ft)**	**GW Elev. (ft)**
6/15/2017*	8.9	91.1	6/15/2017	7.53	91.66	6/15/2017	10.02	92.88

* Measured 3 inches free product

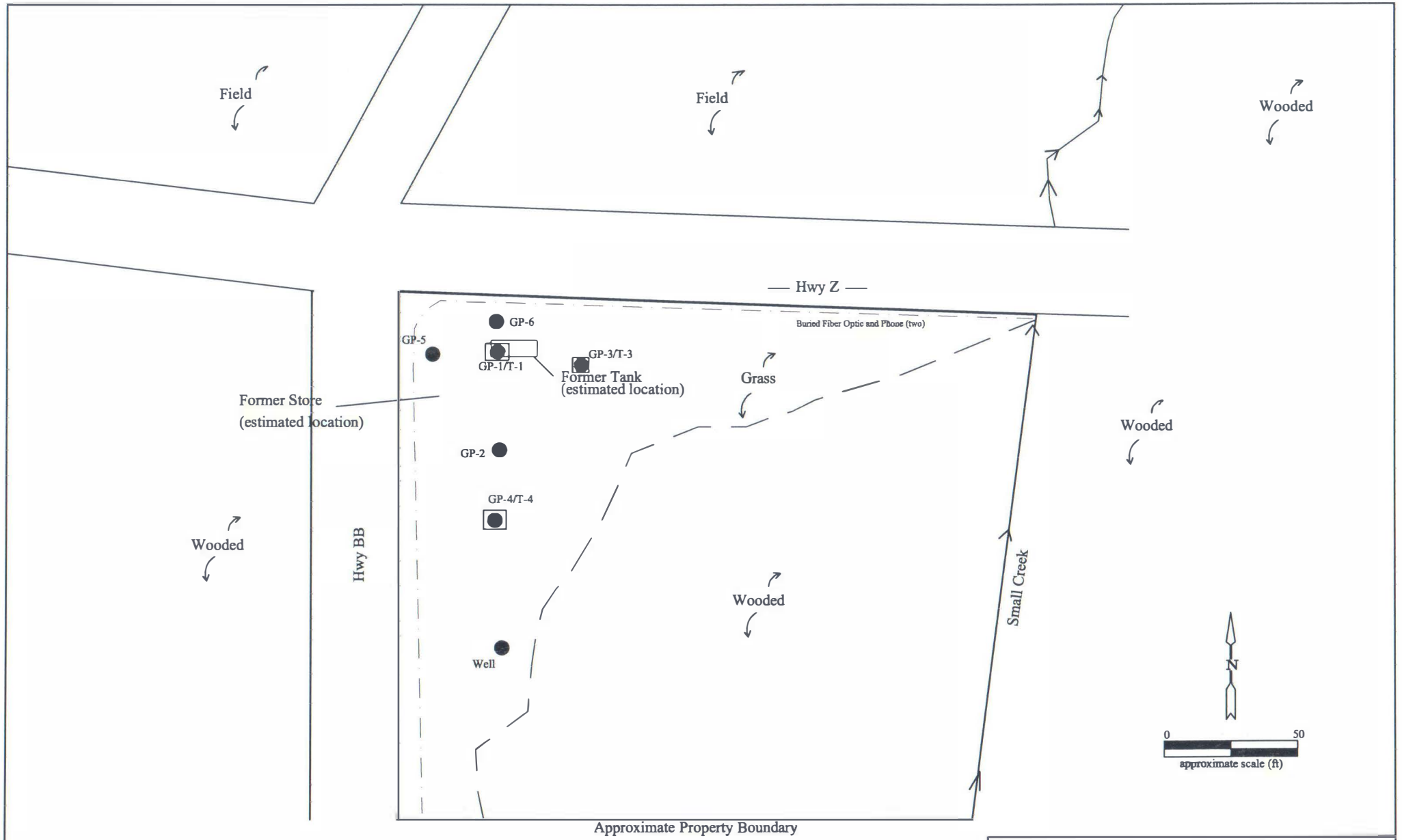

Figure 1
Soil Borings/Temp Wells
Julson Store (Former)
Mondovi, WI

PROJECT NO.	PREPARED BY
05F823	KAS
DATE	REVIEWED BY
9/23/17	KAS

Meridian Environmental Consulting, LLC

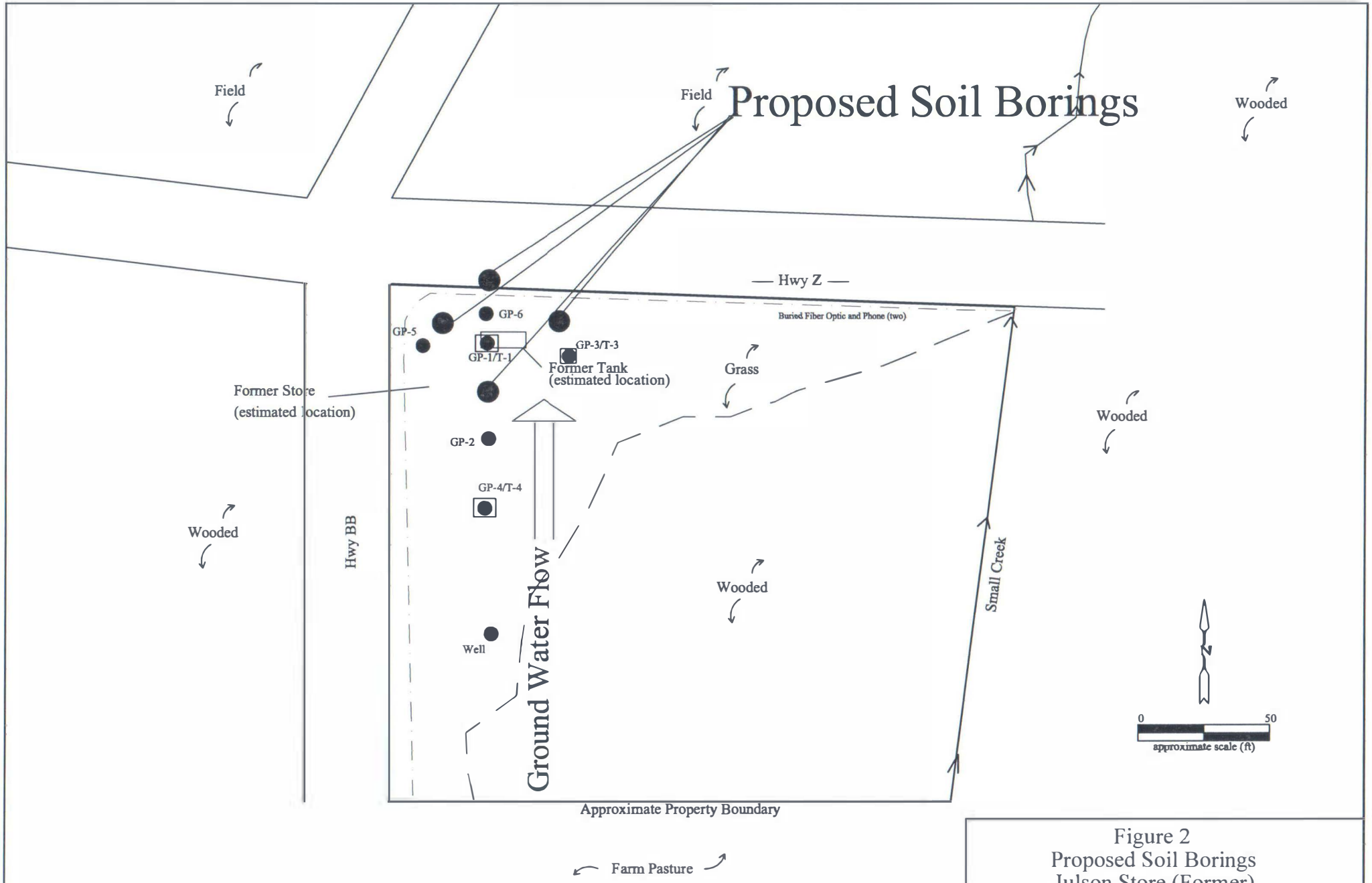

Figure 2
Proposed Soil Borings
Julson Store (Former)
Mondovi, WI

PROJECT NO.	PREPARED BY
05F823	KAS
DATE	REVIEWED BY
9/23/17	KAS

Meridian Environmental Consulting, LLC

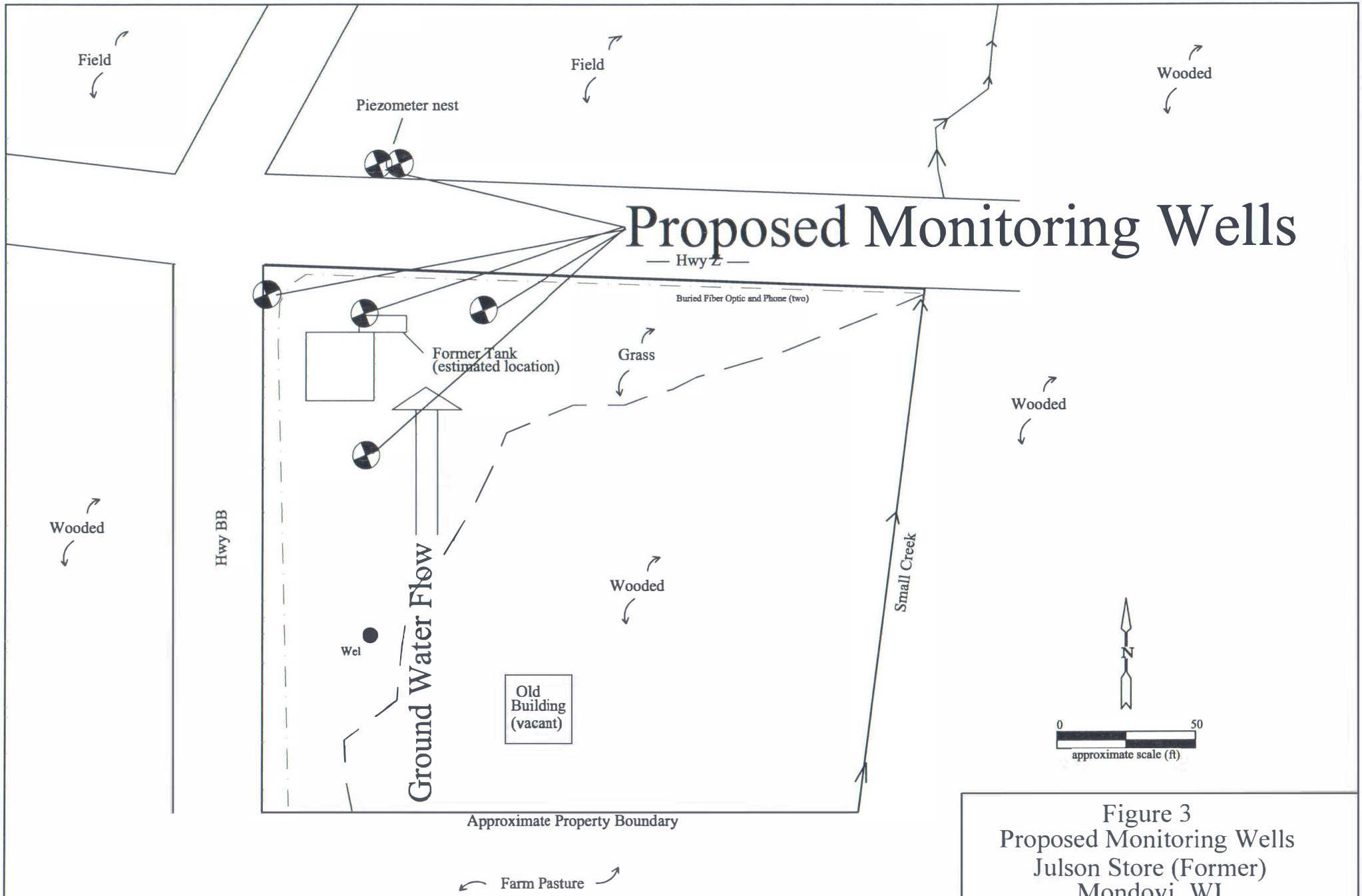

Figure 3
Proposed Monitoring Wells
Julson Store (Former)
Mondovi, WI

PROJECT NO	PREPARED BY
05F823	KAS
DATE	REVIEWED BY
9/23/17	KAS

Meridian Environmental Consulting, LLC