



Meridian Environmental Consulting, LLC

March 6, 2019

Matt Vitale
Wisconsin Department of Natural Resources
1300 W Clairemont
Eau Claire, Wisconsin 54701

Subject: **Change Order/Work Plan:**

- Soil and Ground Water Sampling
- Potable Well Reconnaissance

Grace's Store
33768 State Hwy. 21
Camp Douglas, Wisconsin
DNR BRRTS No. 03-42-204862
PECFA No. 54618-8018-68
Meridian No. 05F756

Dear Matt:

This Change Order/Work Plan is to provide current information regarding petroleum concentrations in the soil and ground water in order to evaluate this site for Closure with GIS Registry.

We recommend:

- sampling existing monitoring wells (if still present) and potable wells (onsite and adjacent)
- Geoprobe investigation of former tank areas
- Letter Report

This Change Order/Workplan relies directly on two previous reports for background information:

- Site Investigation/Closure Assessment Report by Envirogen dated April 2003
- Project Status Report and Change Order by Meridian dated December 18, 2012

Figures 1 and 2 are provided for reference.

PROPOSED SCOPE OF WORK

We recommend soil and ground water data be collected to determine current conditions. This is necessary for accurate GIS Registry maps, tables, and GIS notifications. In addition, the potential for Vapor Intrusion can be evaluated.

This will be accomplished by conducting the following tasks:

- Sample existing monitoring wells.

We will attempt to locate the existing monitoring wells (Figure 2) using site diagrams and a metal detector. If found, we will redevelop the wells if possible and collect ground water samples (PVOC+Naphthalene). The wells' elevations will be surveyed (relative to local benchmark). The depth to ground water will be measured.

- Sample potable well(s)

The onsite well and adjacent well (to the east) will be sampled (subject to owner's permission).

- Potable Well Reconnaissance

A map will be prepared which documents the location of private wells within 1200 feet radius of the site (per Closure Packet requirement).

- Soil borings in areas of concern (tank basin, pump island, fuel oil tank)

The soil conditions in the former tank basin, former pump island area, and the former fuel oil tank location should be investigated to determine current conditions. Direct Contact standards may have been exceeded in boring MW-2 (see Envirogen report - Table 4). Petroleum impacts were also measured in soil samples from MW-3, MW-6 and TB-1.

We recommend 5 soil borings at each area of concern to allow for a boring through the center plus 4 borings around the perimeter (Figure 3).

The borings will be installed to 20 feet. Soil samples will be collected throughout the boring depth to document the lithology in each boring. Selected samples will be collected at 4 ft intervals (3-4 ft, 7-8 ft, 11-12 ft, 15-16 ft, 19-20 ft) and analyzed for PVOC+Naphthalene. A ground water sample will be collected from each boring and also analyzed for PVOC+Naphthalene.

The nearby potable well logs (see Appendix D – Meridian report) indicate a sand aquifer about 20 feet below grade. At least one soil boring in each location will be extended if needed (no further than 30 feet) to allow a ground water sample from this sand formation.

Soil borings will also be installed around the perimeter of the property in the locations shown in Figure 3. Soil and ground water samples will be collected from each boring as described above.

- Letter Report

A letter report will be prepared documenting this Change Order Scope of Work in context with previous work. This report will also include our recommendations regarding further work needed to achieve Closure with GIS Registry. The potential for Vapor Intrusion will be evaluated.

SCHEDULE

We recommend this work be completed after the snow melts (May?).

COST

A Change Order for the proposed work is included.

Sincerely,

MERIDIAN ENVIRONMENTAL CONSULTING, LLC



Kenneth Shimko, PG
Project Manager

C: Gary Gilbert, P.E.
Project Engineer

Usual and Customary Standardized Invoice #25

January 2019 - June 2019 (updated 2/25/19)



RR-107a

PECFA #: 54618-8018-68 Vendor Name: Change Order
 BRRTS #: 03-42-204862 Invoice #: Change Order
 Site Name: Grace's Store Invoice Date: March 2019
 Site Address: Camp Douglas (Shennington) Check #: Change Order

U&C Total \$ 18,066.99
 Variance to U&C Total \$ -
 Grand Total \$ 18,066.99

Sample existing wells (1,2,3,4,5,6, TMW-1), potable wells (2)= 9 GW samples (PVOC+Naphthalene). Survey existing MWs elevation (local datum). Potable Well Reconnaissance. Soil Borings (20 borings x 20 ft deep = 400 ft. Five (5) samples/boring x 20 borings = 100 soil samples (PVOC+Naphthalene) + 1 GW sample/boring x 20 borings = 20 GW samples (PVOC+Naphthalene). Dispose Investigative Waste (1 drum purge water, 1 drum soil cuttings). Letter Report.

TASK	TASK DESCRIPTION	SERVICES	ACTIVITY CODE	ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAX UNIT COST	UNITS	TOTAL MAX
1	GW Sampling		GS05	Sample Collection	Well	\$ 72.45	9	\$ 652.05
1	GW Sampling		GS25	Primary Mob/Demob	Site	\$ 690.92	1	\$ 690.92
4	Waste Disposal	Consultant	WD05	Consultant Coordination	Site	\$ 137.13	1	\$ 137.13
4	Waste Disposal	Commodity	WD10	GW Sample and/or Purge	Drum	\$ 42.11	1	\$ 42.11
4	Waste Disposal	Commodity	WD15	Drill Cuttings	Drum	\$ 108.15	2	\$ 216.30
4	Waste Disposal	Commodity	WD17	Landfill Environmental Fee (provide documentation)	ACTUAL COST			
4	Waste Disposal	Commodity	WD25	Primary Mob/Demob (1 - water, 1 - soil)	Site	\$ 316.47	2	\$ 632.94
6	Letter Report/Addendum		LRA05	Letter Report/Addendum	Letter	\$ 1,039.29	1	\$ 1,039.29
11	Potable Well Field Reconnaissance		PWFR05	Potable Well Field Reconnaissance	Site	\$ 583.50	1	\$ 583.50
12	Direct Push	Consultant	DP05	0 - 24 ft bgs W/ Continuous Soil Sampling	Ft	\$ 5.36	400	\$ 2,144.00
12	Direct Push	Consultant	DP20	GW Sample Collection	Each	\$ 36.10	20	\$ 722.00
12	Direct Push	Consultant	DP30	Primary Mob/Demob	Site	\$ 563.31	1	\$ 563.31
12	Direct Push	Commodity	DP35	0 - 24 ft bgs W/ Continuous Soil Sampling	Ft	\$ 6.93	400	\$ 2,772.00
12	Direct Push	Commodity	DP50	GW Sample Collection (cost for tubing)	Ft	\$ 0.42	400	\$ 168.00
12	Direct Push	Commodity	DP55	Expendable Drive Point	Each	\$ 14.49	20	\$ 289.80
12	Direct Push	Commodity	DP60	Borehole Abandonment	Ft	\$ 1.26	400	\$ 504.00
12	Direct Push	Commodity	DP65	Concrete Penetration	Each	\$ 20.10		\$ -
12	Direct Push	Commodity	DP70	GW Sample Collection	Each	\$ 39.27	20	\$ 785.40
12	Direct Push	Commodity	DP80	Mob/Demob (includes decon)	Site	\$ 578.66	1	\$ 578.66
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		MDT41	Private Utility Locate	ACTUAL COST		1	\$ 150.00
31	Consultant Overnight Per Diem		COPD05	Overnight	Night	\$ 125.09	1	\$ 125.09
33	Schedule Of Laboratory Maximums	Commodity		Laboratory (see task 33 total on Lab Schedule)	Lab Schedule			\$ 4,482.15
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 #25

January 2019 - June 2019 (updated 2/25/19)



RR-107a

TOTAL LAB CHARGES \$ 4,482.15 TASK 33 129 \$ 4,482.15 TASK 24 0 \$ -

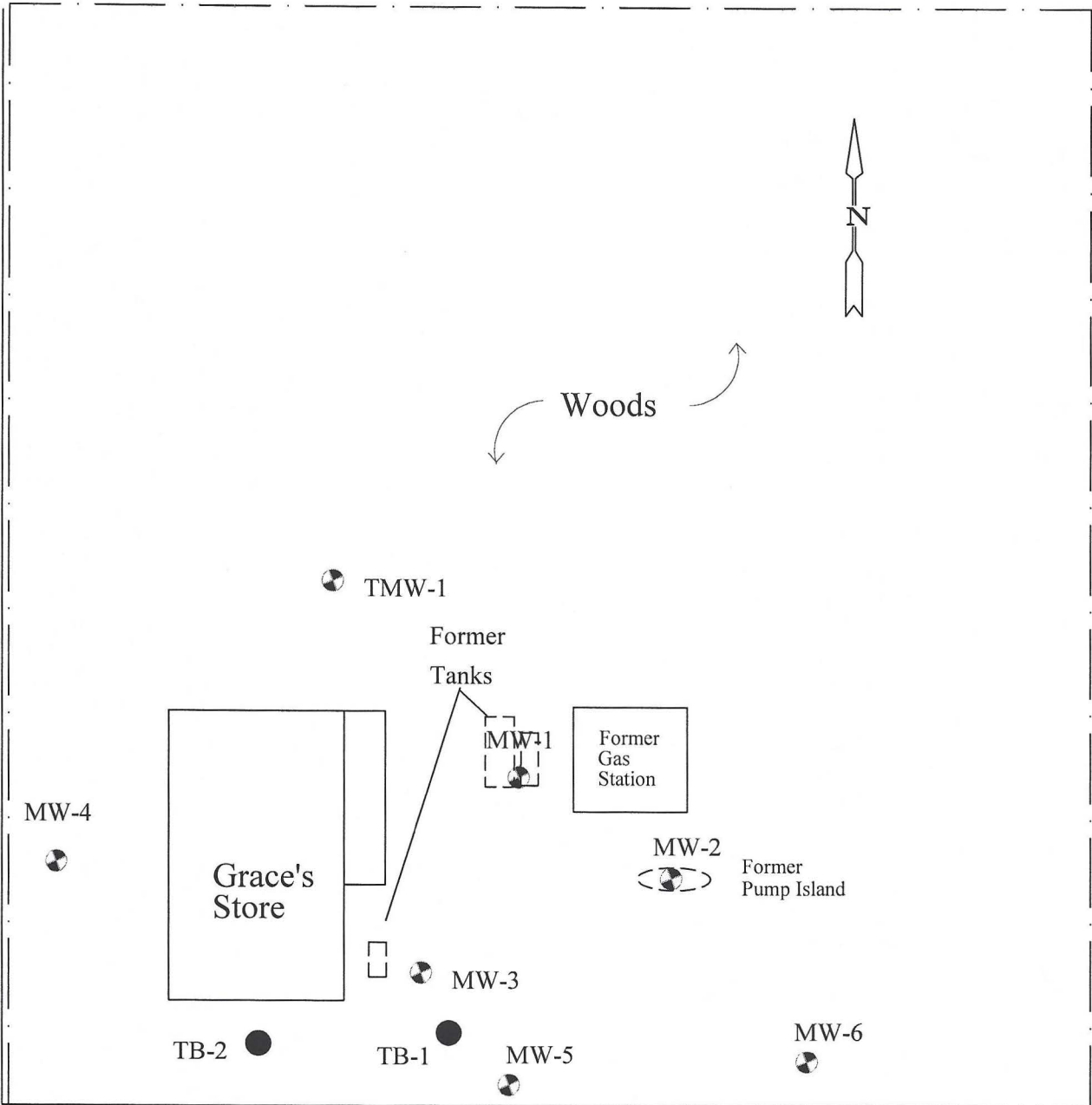
MATRIX	REF CODE	REIMBURSABLE ANALYTE	UNITS	MAX COST	SAMPLES	TOTAL	MAX COST	SAMPLES	TOTAL
AIR	A1	Benzene	SAMPLE	\$ 44.94		\$ -			
AIR	A2	BETX	SAMPLE	\$ 49.46		\$ -			
AIR	A3	GRO	SAMPLE	\$ 46.10		\$ -			
AIR	A4	VOC's	SAMPLE	\$ 71.93		\$ -			
WATER	W1	GRO/PVOC	SAMPLE	\$ 29.19		\$ -			
WATER	W2	PVOC	SAMPLE	\$ 26.99		\$ -			
WATER	W3	PVOC + 1,2 DCA	SAMPLE	\$ 43.79		\$ -			
WATER	W4	PVOC + Naphthalene	SAMPLE	\$ 30.35	29	\$ 880.15			
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	100	\$ 3,602.00	\$ 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		\$ -			
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		\$ -			
		Viscosity + Density							
LNAPL	LFPS01	Interfacial tension I (LNAPL/water [dyne/cm])	SAMPLE	\$ 561.33		\$ -			
		Interfacial tension II (LNAPL/air [dyne/cm])							
		Interfacial tension III (water/air) [dyne/cm]							
TASK 33 TOTAL						\$	4,482.15		

**Figure 1:
Aerial of Site Vicinity
Grace's Store**




DISCLAIMER: This map is not guaranteed to be accurate, correct, current, or complete and conclusions drawn are the responsibility of the user.

Dublin Road



Hwy 21

Legend

 Monitor Well

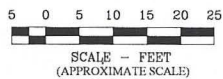



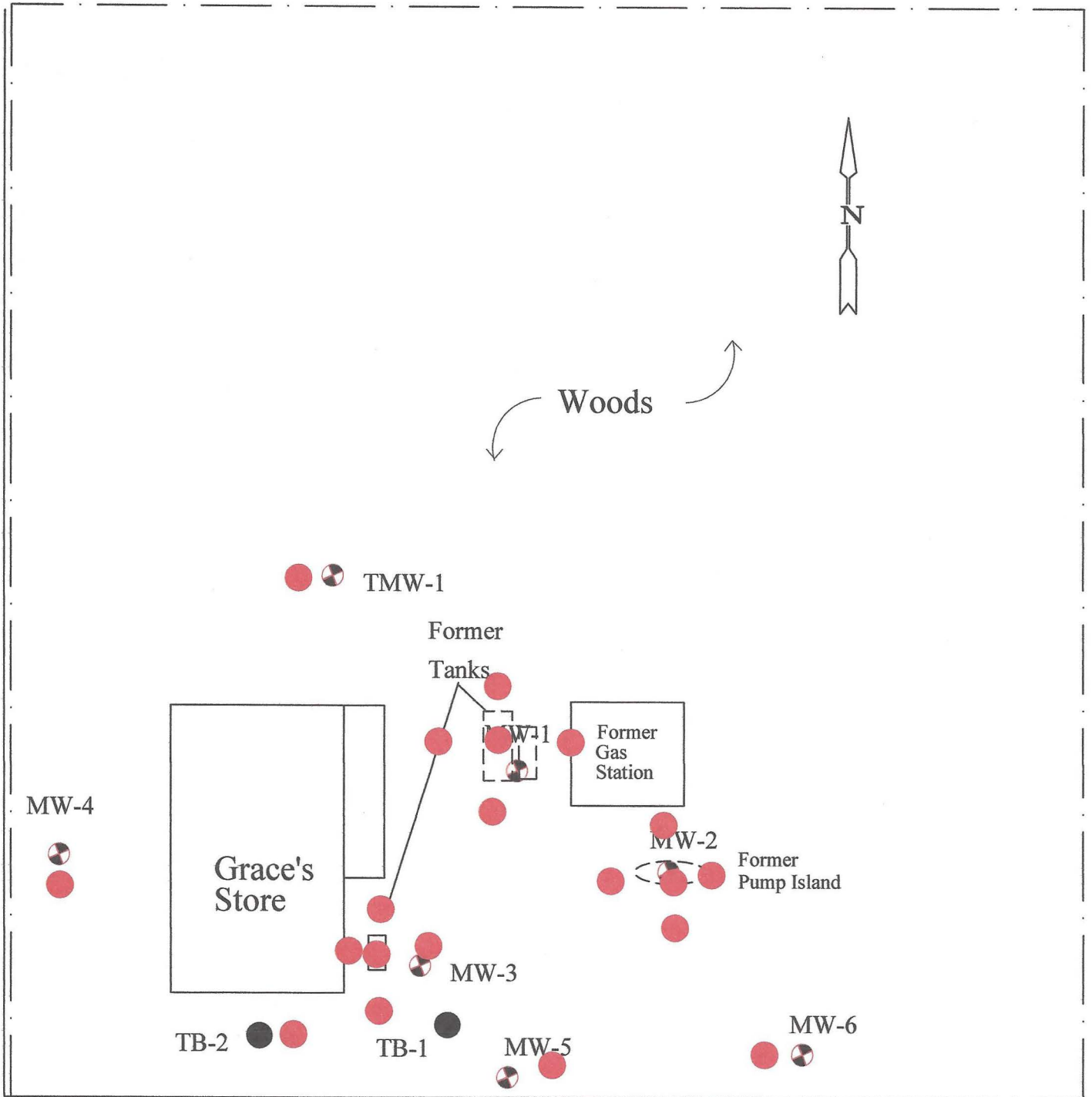
Figure 2
Site Diagram
Grace's Store
Shennington (Camp Douglas), WI

PROJECT NO. 05F756	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 3/1/19	REVIEWED BY KAS	

Dublin Road



Woods



MW-4

TMW-1

Former Tanks

Former Gas Station

Grace's Store

MW-2

Former Pump Island

MW-3

TB-2

TB-1

MW-5

MW-6

Hwy 21

● Proposed Soil Boring

Legend

Monitor Well

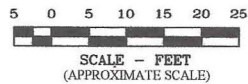


Figure 3
 Proposed Borings
 Grace's Store
 Shennington (Camp Douglas), WI

PROJECT NO.

05F756

PREPARED BY

KAS

DATE

3/1/19

REVIEWED BY

KAS



Meridian
Environmental
Consulting, LLC