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(43)

## 2014 Progress Report

### Environmental Remediation of a Petroleum Release

#### *Site*

Pap's General Store  
1637 80<sup>th</sup> Street  
Balsam Lake, WI 54810

*Prepared for*

Rick Scoglio  
1637 80<sup>th</sup> St.  
Balsam Lake, WI 54810

WDNR BRRTS #03-49-223213  
PECFA # 54810-2432-37

Project S2880-003  
February 10, 2015  
Cedar Corporation  
PECFA Participation No. 240179



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February 10, 2015

Mr. Phil Richard  
Department of Natural Resources  
875 S 4<sup>th</sup> Avenue  
Park Falls, WI 54552

SUBJECT: Pap's General Store, Balsam Lake – 2014 Progress Monitoring Report  
PECFA #54810-24329-37  
BRRTS #03-49-223213

Dear Mr. Richard,

This report summarizes the results of the sampling activities that have occurred since the October 23, 2013. Two semi-annual rounds of groundwater monitoring have occurred from May 2014 through November 1, 2014.

Included with this report please find:

- |            |  |
|------------|--|
| Table 1.   | Residual Soil Contamination Analytical Summary     |
| Table 2.   | Groundwater Elevations and Hydrograph              |
| Table 3.   | Free Product Recovery Summary                      |
| Table 4.   | PVOC, Naphthalene, and Detected VOC in Groundwater |
| Figure 1.  | Topographic Map (1"= 660 ft.)                      |
| Figure 2.  | Aerial Photograph (1"= 1,320 ft.)                  |
| Figure 3.  | Polk County GIS Property Map                       |
| Figure 4.  | Post Remediation Residual Soil Contamination Plan  |
| Figure 5.  | PVOC + Naphthalene Concentration vs Time Graphs    |
| Figure 6.  | Groundwater Flow Map June 2014                     |
| Figure 7.  | Groundwater Flow Map October 2014                  |
| Figure 8.  | Benzene Isoconcentration Map October 2014          |
| Figure 9.  | Ethyl-benzene Isoconcentration Map October 2014    |
| Figure 10. | Naphthalene Isoconcentration Map October 2014      |
| Figure 11. | Toluene Isoconcentration Map October 2014          |

## **Setting:**

Pap's General Store is located about 300 feet south of the Apple River and 1000 feet west of White Ash Lake (Figures 1 and 2.) The site is located in a 200 degree loop in the river and is some 15 to 25 feet above the river elevation. The river generally flows from east to west in this area. The Delores Olson residence is immediately north of Pap's and the Pearson's own the surrounding acreage west and south of Pap's General Store. To the east is 80<sup>th</sup> Street with the Walter Strey residence to the northeast and the Buffalo Ridge Trails LLC property to the east (Figure 3).

On December 2, 2008 1,393 tons of contaminated soil removal was removed over a 2000 square foot area to a depth of 15-16 feet in the Pap's General Store parking lot (northeast corner of the property). The asphalt surface was removed for recycling and the contaminated soil source material was removed as best possible considering conditions. Unfortunately not all contaminated source material could be removed due to depth to the water table, caving soils, and nearby structures. Insufficient space allowed the excavation to be entered with the backhoe limiting the depth extent of the corrective action. The removed asphalt has not been replaced on the excavated area. Mr. Scoglio intends to replace it once this case is closed and the monitoring wells (MW-1R, MW-2 and MW-3) removed. Figure 4 presents the excavation boundary and the residual benzene soil contamination at the base of the excavation. Table 1 summarizes residual BTEX analyses at remedial action sample points. These data indicate the presence of PVOC and naphthalene contamination in close proximity to the water table in certain areas notably near the northeast wall of the building in the vicinity of existing wells MW-1R and MW-2.

## **Water Table:**

Groundwater measurements (Table 2) are consistent with previous measurements with variations in water table elevations occurring in all wells with precipitation and snow melt events over the monitored period. Ground water was identified as northeasterly towards the Apple River in the last report (May 2011) and has shown to be northeasterly to northerly at the monitoring events over the last two monitoring events (Figures 6 & 7).

MW-6 continues to be the up gradient well. Located west of the source area it is also more centrally located on the highland area between the oxbow bend in the Apple River (see Figure 1). Ground water flow is generally dictated by topography and regional discharges (such as the Apple River). Consistent flow patterns can be assured when consistent elevations in ground water are observed. However, variations in flow patterns are present at this location due to small changes (usually variations of less than 0.2 feet) in groundwater elevations in various wells with resultant flow patterns varying from north to northeast. The flow direction appears to be more northeast in the fall with a northerly component observed in the spring events.

Historic free product measurements are summarized in Table 3. No free product was observed over the current monitoring period (the last measureable free product was observed in 2010). Well MW-1R replaced MW-1. Free product was regularly present in MW-1 prior to the site excavation (December, 2008). However, no free product has been observed to date in MW-1R. Free product was previously observed in MW-2 but was not observed during this monitoring period. A total of 18 gallons of product was recovered from January 2007 to September 2010 from wells MW-1 and MW-2.

## **Groundwater Quality:**

Groundwater samples were collected and preserved according to EPA Methods for PVOC + Naphthalene. During this monitoring program samples were collected from 6 monitoring wells (MW-1R, MW-2, MW-3, MW-5, MW-7 and MW-9) and three residential wells (Pap's Store, Olson, and Strey residences). All samples were shipped to TestAmerica Inc. in Watertown, WI laboratory (DNR certification # 128053530) or Chicago, IL (DNR Certification # 999580010) for analysis of PVOC plus naphthalene. The analytical data is summarized in Table 4 and analytical reports for this monitoring period are attached to this report.

Wells previously free of detections of PVOC continued to be free of PVOC during the last two monitoring rounds. Groundwater concentrations of Benzene, Ethyl-benzene, Toluene, Total Trimethylbenzenes, Total Xylenes, and Naphthalene continue to exceed the Enforcement Standard in wells MW-1R and MW-2 with sporadic detections in MW-5 and below PAL detections in MW-7. Concentration vs Time graphs for the period post excavation (Dec. 2, 2008) are presented in Figure 5 for Benzene, Ethyl-benzene, Naphthalene, Toluene, and Total Xylenes. Decreasing trends are noted for Benzene, Toluene and Xylenes in wells MW-1R and MW-2. Concentrations for these compounds are sporadic in wells MW-3 and MW-5 and are spiking in MW-7 with an increasing trend for Naphthalene observed in wells MW-1R and MW-2 and Ethyl-Benzene in MW-1R. Current (November 5, 2014) contaminant plume conditions are presented in Figures 8, 9, 10 and 11 presenting isoconcentrations of Benzene, Ethyl-Benzene, Naphthalene, and Toluene respectively.

No contaminants have been detected above method detection levels in any of the residential well samples over the history of the project.

## **Discussion:**

Groundwater movement in the spring and early summer is observed to vary from the previous observations and the November 2014 round. This is attributed to the increased snow pack experienced in the winter of 2013.

MW-1R replaced MW-1 in the contaminated soil excavation and MW-2 is on the very northwest edge of the excavation. Groundwater quality conditions in these wells show improvement in that decreasing concentrations are present for most compounds, particularly those that are more volatile. Contamination was not observed in wells other than MW-1/R, MW-2, MW-5 and MW-7. The isoconcentration maps suggest the spring runoff has having separated a slug of contamination which is moving through well MW-5. This situation was previously observed. In the past well MW-7 which is offsite and north of the source area, presented higher concentrations of the less volatile BTEX compounds than observed on site. This was not the case in 2014, again attributed to a ground water flow direction that moved the plume more northeasterly. Yet MW-3 located less than 50 feet from the source wells on the northeast edge of the excavation and presents inconsistent and sporadic detections of PVOC. If groundwater flow were consistently northeasterly one would expect this well to present consistent and increasing concentrations of PVOC comparable to those observed in MW-1R and MW-2 which is not the case.

These observations suggest that geologic conditions of the aquifer are not uniform and the movement of the plume is primarily northerly but due to stresses on the water table as a result of high runoff/infiltration events, the flow direction is more northeasterly. The plume maps also suggest there is

variable ground water flow movement of the contamination towards the Apple River.

The contaminant plume can be characterized as stagnant to slowly moving northward (in the direction of down gradient well MW-9). Free product has not been observed since 2010 and is believed to have been removed during the 2008 excavation and the residual dissolved into the aquifer as is evidenced by the higher concentrations of PVOC + Naphthalene observed in wells MW-1R and MW-2.

The current interpretation is that the contamination will continue to move northward and eventually enter the Apple River. No water supply wells are considered at risk as the Olson well is up gradient of the plume and there is no evidence that the plume has moved in the direction of the Strey well. Neither the Olson nor Strey properties have sufficient land between their existing well locations and the Apple River to the north for development of additional properties, limiting the potential risk for the plume to impact human health. Discharge to the river will not occur for over 20 years given the length of time the plume existed prior to the current monitoring effort. The concentration at the point of discharge some 200 feet down gradient of the contamination noted in well MW-7 is unknown.

Continued work to evaluate the extent, magnitude, and threat to human health or the environment of the contamination at the site does not appear to be warranted. Decreasing or stable contamination levels can be attributed to the soil removal and natural attenuation. Increasing concentrations of naphthalene and xylenes on site in wells MW-1R and MW-2 are attributed to the movement of residual contamination from under the building. Given the additional monitoring and determination of plume movement and lack of risk to the public, it is recommended that this site be submitted to the closure committee for case closure with the Scoglio and Olson properties registered on the DNR BRRTS GIS database website for residual contamination.

If you have any questions please feel free to call me at 715-235-9081.

Sincerely;  
CEDAR CORPORATION



Scott McCurdy, P.G.  
Principal

Att.

cc. Mr. R. Scoglio, 1637 80<sup>th</sup> St., Balsam Lake, WI 54810



## **TABLES**

engineers • architects • planners • environmental specialists • land surveyors • landscape architects • interior designers

TABLE #1  
 POST EXCAVATION SOIL SAMPLE ANALYTICAL RESULTS  
 PAP'S GENERAL STORE  
 BALSAM LAKE, WI

				Results reported in ug/Kg							
				Benzene	E - Benzene	MTBE	Naphthalene	Toluene	1,2,4 TMB	1,3,5 TMB	Xylenes
Wis Adm. Code NR720, Table 1 & 2, Residual Contaminant Levels				5.5	2,900	NS	NS	1,500	NS	NS	4,100
Wis Adm. Code NR746.06 Table 1, Residual Petroleum Product				8,500	4,600	NS	2,700	38,000	83,000	11,000	42,000
Wis Adm. Code NR746.06 Table 2, Direct Contact				1,100	NS	NS	NS	NS	NS	NS	NS
Boring Name	Sample Depth	Sample Date	Laboratory ID								
EX-1	4	12/2/2008	WRL0139-01	<26	<26	<26	370	97	690	200	480
EX-2	12	12/2/2008	WRL0139-02	14,000	96,000	<1400	38,000	320,000	310,000	97,000	710,000
EX-3	13	12/2/2008	WRL0139-03	34,000	170,000	<3500	120,000	550,000	980,000	320,000	1,500,000
EX-4	4	12/2/2008	WRL0139-04	54	46	<26	<51	320	130	48	330
EX-5	12	12/2/2008	WRL0139-05	<26	<26	<26	<52	95	31	<26	<88
EX-6	4	12/2/2008	WRL0139-06	<26	<26	<26	<52	55	<26	<26	<88
EX-7	12	12/2/2008	WRL0139-07	180	4,300	<36	3,400	5,000	32,000	8,100	27,000
EX-8	4	12/2/2008	WRL0139-08	<27	<27	<27	<54	81	<27	<27	<92
EX-9	12	12/2/2008	WRL0139-09	6,500	29,000	<350	9,200	99,000	79,000	26,000	170,000
EX-10	14	12/2/2008	WRL0139-10	46	<26	<26	<52	160	28	<26	<89
EX-11	10	12/2/2008	WRL0139-11	650	1,400	<37	310	4,000	4,700	1,700	7,000
EX-12	4	12/2/2008	WRL0139-12	190	2,600	<37	2,800	4,900	21,000	5,400	22,000
EX-13	4	12/2/2008	WRL0139-13	<26	<26	<26	<52	110	<26	<26	<88
EX-14	12	12/2/2008	WRL0139-14	1,300	8,500	<150	3,800	24,000	31,000	9,500	53,000
EX-15	4	12/2/2008	WRL0139-15	<34	<34	<34	<67	<34	<34	<34	<110
EX-16	16	12/2/2008	WRL0139-16	2,600	41,000	<640	15,000	95,000	120,000	40,000	260,000
EX-17	4	12/2/2008	WRL0139-17	<25	<25	<25	<51	96	<25	<25	<87
EX-18	14	12/2/2008	WRL0139-18	7,300	140,000	<1900	48,000	240,000	450,000	150,000	910,000

MTBE = Methyl tert butyl ether

TMB = Trimethylbenzene

E-Benzene = Ethylbenzene

1,2-DCA = 1,2 Dichloroethane

Values in **Bold Typeface** or *Italics* exceed listed table value.

ug/Kg= micrograms per kilogram = ppb = parts per billion

mg/Kg= milligrams per kilogram = ppm = parts per million

IU = Instrument Units

NA = Not Analyzed

NS = No Standard Established

TABLE 2  
GROUNDWATER ELEVATIONS

PAP'S GENERAL STORE  
BALSAM LAKE, WI  
BRRTS #03-48-223213  
COMMERCE #54810-2432-37

WELL	MW-1	MW-1R	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	P-8	MW-9	MW-10	MW-11
CASING ELEV.	1133.68	1133.95	1134.04	1133.07	1133.76	1131.49	1133.82	1134.5	1134.42	1131.26	1128.11	1132.24
GROUND ELEV.	1134.20	1134.45	1135.39	1133.78	1134.23	1132.14	1134.22	1134.96	1134.96	1131.78	1128.56	1132.70
SCREEN TOP ELEV.	1124.34	1125.65	1122.89	1124.83	1123.95	1121.97	1124.08	1125.53	1094.30	1123.46	1122.98	1123.99
SCREEN BOTTOM ELEV.	1114.34	1115.65	1112.89	1114.83	1113.95	1111.97	1114.08	1115.53	1089.30	1113.46	1112.98	1113.99
DATE												
10/31/2000	1120.76	1120.76	1119.82	1120.97								
01/19/2007	1119.36	1119.36	1119.29	1120.35	1120.84	1120.17	1121.80	1120.25	1120.97			
04/24/2007	1119.52	1119.52	1119.92	1120.54	1121.03	1120.15	1122.11	1120.48	1121.12			
07/10/2007	1119.78	1119.78	1119.37	1120.36	1120.86	1120.01	1121.77	1120.22	1120.88			
10/17/2007	1120.48	1120.48	1120.50	1121.96	1121.54	1120.97	1123.45	1120.96	1121.18			
01/24/2008	1119.89	1119.89	1119.25	1120.17	1120.81	1119.85	1122.39	1120.23	1120.61			
07/14/2009	1120.17	1119.40	1120.05	1120.55	1119.89	1121.79	1119.90	1120.45	1119.23	1119.26	1120.22	
10/13/2009	1120.27	1119.71	1120.26	1120.67	1120.31	1121.86	1120.04	1120.52	1119.51	1119.74	1119.94	
01/19/2010	1120.03	1119.23	1119.92	1120.49	1119.63	1121.83	1119.90	1120.32	1119.23	1119.01	1119.14	
04/14/2010	1120.41	1120.28	1120.25	1120.84	1119.96	1122.69	1120.27	1120.51	1119.54	1119.89	1119.66	
07/20/2010	1120.80	1120.74	1121.01	1121.42	1120.57	1123.32	1120.55	1120.71	1119.72	1119.98	1120.38	
09/30/2010	1121.39	1121.10	1121.75	1122.03	1121.11	1124.25	1121.16	1121.17	1120.56	1120.97	1121.41	
05/03/2011	1122.19	1121.84	1122.38	1123.31	1121.80	1124.98	1122.02	1121.62	1121.08	1121.26	1121.48	
10/19/2011	1121.23	1121.19	1121.42	1121.77	1120.59	1123.15	1120.98	1121.41	1120.12	1120.07	1120.19	
04/12/2012	1120.64	1120.90	1120.49	1121.01	1121.17	1122.50	1120.48	1121.00	1119.78	1120.24	1119.70	
04/30/2013	1121.13	1121.09	1121.15	1121.23	1122.71	1123.26	1120.86	1121.31	1120.73	1121.68	1121.55	
10/23/2013	1120.56	1120.49	1120.44	1120.94	1120.57	1122.77	1120.28	1120.80	1119.61	1120.52	1119.93	
06/12/2014	1123.62	1123.49	1123.52	1124.41	1123.24	1125.91	1122.58	1122.07	1121.90	1122.66	1122.59	
11/05/2014	1121.33	1121.24	1121.52	1121.93	1120.62	1123.23	1121.07	1121.56	1120.16	1120.41	1120.37	

Pap's General Store,  
Groundwater Hydrograph 2006 -2013

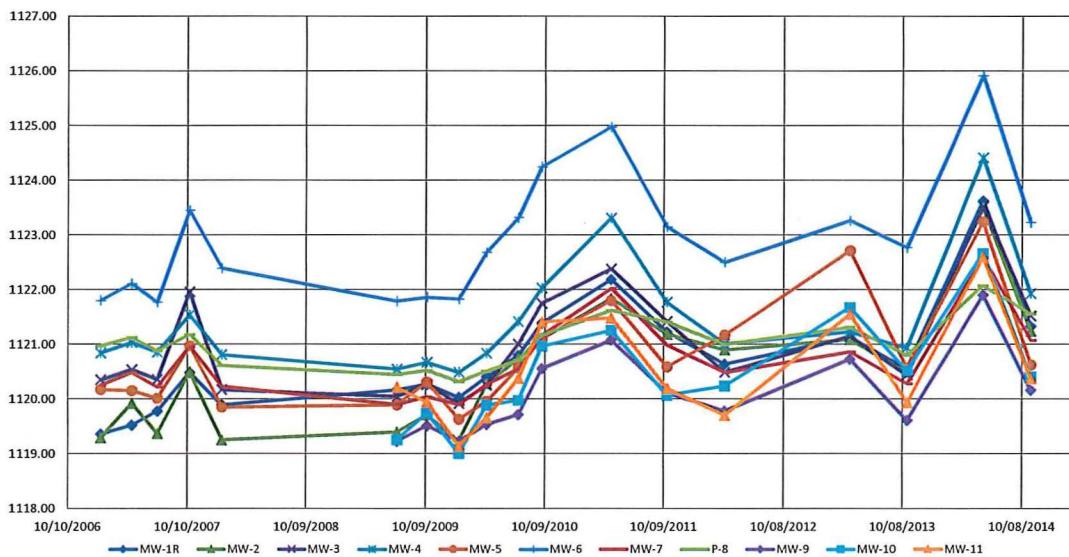


TABLE 2  
Groundwater Elevations and Hydrograph

**Table 3**  
**Pap's General Store**  
**Balsam Lake, WI**  
**Free Product Data**

WELL	SAMPLE DATE	FP Thickness (FT)	Volume Recovered (Gal)
MW - 1	1/19/07	1.34	0.5
	2/8/07	0.71	0.25
	3/19/07	0.56	0.25
	4/24/07	1.44	0.25
	5/15/07	1.77	0.75
	6/13/07	1.52	0.75
	7/10/07	0.84	0.25
	8/2/07	0.61	0.25
	8/29/07	0.49	0.25
	10/17/07	0.79	0.3
	11/13/07	0.76	0.7
	12/18/07	0.83	0.3
	1/24/08	0.59	0.3
Product recovered			5.1
MW-1R	7/14/09	0	
	10/13/09	0	
	1/19/10	0	
	4/14/10	0	
	7/20/10	0	
	9/30/10	0	
	5/3/11	0	
	10/19/11	0	
	4/12/12	0	
	4/30/13	0	
	10/23/13	0	
	6/12/14	0	
	11/5/14	0	
Product recovered			0
MW-2	1/19/07	1.45	1
	2/8/07	1.6	1.5
	3/19/07	1.3	1.5
	4/24/07	0.95	0.75
	5/15/07	1.24	0.75
	6/13/07	1.19	0.5
	7/10/07	1.37	0.75
	8/2/07	1.52	1.3
	8/29/07	1.33	1.45
	10/17/07	0.83	0.5
	11/13/07	0.98	0.3
	12/18/07	0.7	0.2
	1/24/08	1.44	1.5
	7/14/09	0.93	0.3
	10/13/09	0.32	0.25
	1/19/10	1.06	0.25
	4/14/10	0.15	0
	7/20/10	0	0
	9/30/10	0.29	0.1
	5/3/11	0	0
	10/19/11	0	0
	4/12/12	0	0
	4/30/13	0	0
	10/23/13	0	0
	6/12/14	0	0
	11/5/14	0	0
Product recovered			12.9
<b>TOTAL PRODUCT RECOVERED IN GALLONS</b>			<b>18</b>

Table 3  
Observed Free Product

TABLE 4  
Groundwater Analytical Results  
PVOC & Detected VOC (EPA 8020), DRO, GRO

Pap's General Store

Balsam Lake, WI

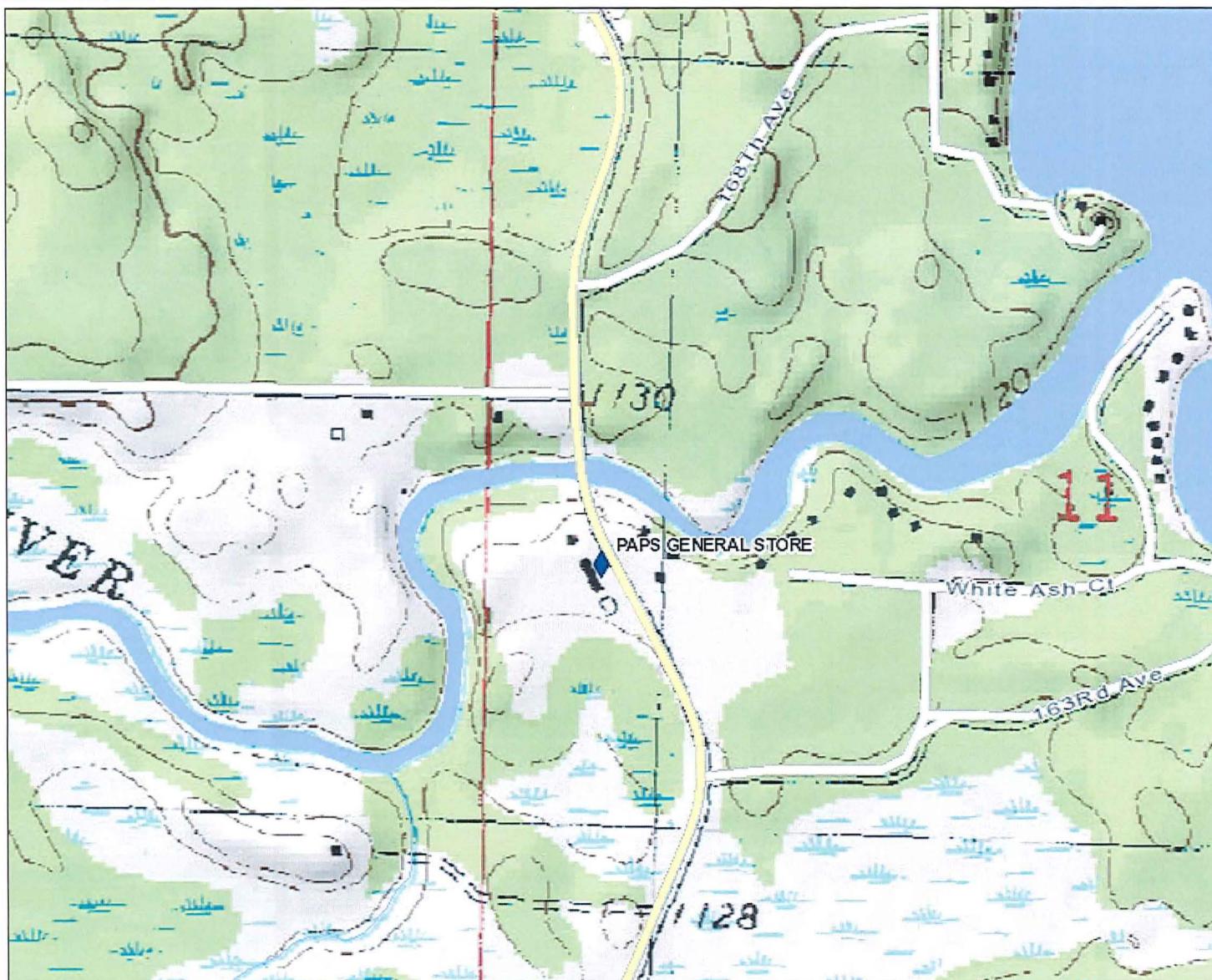
PARAMETER	SAMPLE DATE	MW-1	MW-1R	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	P-8	MW-9	MW-10	MW-11	Olsons	Strey	Paps	
GRO (ug/L)	10/31/00	47,000		FP	750												
DRO (mg/L)	10/31/00	4.7		FP	<0.10												
BENZENE (ug/L)	10/31/00	8,600		FP	150	<0.20	20	<0.20	1,300	<0.20				<0.10	<0.10		
Enforcement Standard - 5.0 Preventive Action Limit - 0.5	1/19/07	FP	2.5	<0.20										<0.20	<0.20		
	4/24/07	FP	7.0	<0.25	120	<0.25			520	<0.25				NS	NS		
	7/10/07	FP	130	<0.25	27	<0.25			1,800	<0.25							
	10/17/07	FP	9.7	<0.25	<0.25	<0.25			370								
	1/24/08	FP		NS	NS	NS	NS	NS	NS					<0.20	<0.20		
	7/14/09	4000	FP	25	<0.25	0.4	<0.25		1,200	<0.25	<0.20	<0.20	<0.20	<0.25	<0.20	<0.25	
	10/13/09	3700	FP	5.2	<0.25	NS	<0.25		1,600	NS	NS	NS	NS	NS	NS	NS	
	1/19/10	3900	FP	60	<0.25	0.54	<0.25		2,200	<0.25	<0.25	<0.20	<0.25	<0.25	NS	<0.25	
	4/14/10	2600	FP	19	NS	<0.25	NS		290	NS	NS	NS	NS	NS	NS	NS	
	7/20/10	3100	2,200	<0.25	<0.25	<0.25	<0.25		580	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	
	9/30/10	3500	FP	<0.25	NS	<0.25	NS			<0.25	NS	NS	NS	NS	NS	NS	
	5/3/11	4300	1,700	<0.20	<0.20	<0.20	<0.20			<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	10/19/11	4300	550	6.2	<0.20	30	<0.20		530	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	4/12/12	3600	586	12.5	<0.25	164	<0.25		40.1	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<0.25	
	4/30/13	1300	1,700	<0.36	<0.36	<0.36	<0.36		6.7	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	
	10/23/13	1400	380	20	<0.36	<0.36	<0.36		1,200	<0.36	<0.36	<0.36	<0.36	NS	NS	NS	
	6/12/14	1200	450	1	<0.36	<0.36				<0.36							
	11/5/14		1400	360	<0.36	<0.36	98	<0.36	<0.36		<0.36				<0.36	NS	<0.36
1,2 EDB (ug/L)	10/31/00	NS		NS				<0.25	<0.25								
Enforcement Standard - 0.05 Preventive Action Limit - 0.005	1/19/07	FP		FP	<0.20	<0.20	<0.20	<0.20	0.23	<0.20				<0.20	<0.20		
	1/24/08	FP		FP	NS	<0.20	<0.20	NS	<0.20	NS							
ETHYLEBENZENE (ug/L)	10/31/00	1,900		FP	13									<0.25	<0.25		
Enforcement Standard - 700 Preventive Action Limit - 140	1/19/07	FP	<0.22	<0.50	8.6	<0.50			640	<0.50				<0.50	<0.50		
	4/24/07	FP	<0.22	<0.22	9.5	<0.22			320	<0.22							
	7/10/07	FP	0.45	<0.22	0.47	<0.22			1,300	<0.22							
	10/17/07	FP	0.64	<0.22	<0.22	<0.22			230	<0.22							
	1/24/08	FP		NS	NS	NS	NS	NS	NS					<0.50	<0.50		
	7/14/09	2,000	FP	2	<0.22	<0.22	<0.22	<0.22	1900	<0.22	<0.50	<0.50	<0.50	<0.25	<0.25	<0.25	
	10/13/09	2,000	FP	<0.22	NS	<0.22	NS		1500	NS	NS	NS	NS	NS	NS	NS	
	1/19/10	2,200	FP	1	<0.22	0.34	<0.22		1900	<0.22	<0.22	<0.22	<0.22	<0.22	NS	<0.22	
	4/14/10	1,700	FP	2	NS	<0.22	NS		230	NS	NS	NS	NS	NS	NS	NS	
	7/20/10	2,100	3,600	<0.22	<0.22	<0.22	<0.22		640	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	
	9/30/10	2,100	FP	<0.22	NS	<0.22	NS			<0.22	NS	NS	NS	NS	NS	NS	
	5/3/11	2,800	3,600	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/19/11	2,900	3,200	4.1	<0.50	110	<0.50		470	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	4/12/12	3,020	2,640	<0.25	<0.25	1060	<0.25		505	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<0.25
	4/30/13	2,000	3,500	<0.37	<0.37	<0.37	<0.37		10	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	
	10/23/13	2,200	1,900	2.5	<0.37	<0.37	<0.37		980	<0.37	0.44	<0.37	<0.37	NS	NS	NS	
	6/12/14	2,000	2,700	<0.37	<0.37	<0.37	<0.37			<0.37	<0.37						
	11/5/14	2,200	2,600	<0.37	<0.37	73	<0.37		3	<0.37	<0.37			<0.37	NS	<0.37	
METHYL TERT-BUTYL ETHER (ug/L)	7/20/10	<23	<23	<0.23	0.23	<0.23	0.29	<9.2	<0.23	<0.23	<0.23	<0.23	0.3	<0.23	<0.23		
Enforcement Standard - 60 Preventive Action Limit - 12	5/3/11	<2.0	<40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	10/19/11	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	4/12/12	<25	1,090	0.41	<0.25	116	<0.25	191	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<0.25	
	4/30/13	150	470	<0.24	<0.24	<0.24	<0.24	5.9	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	
	10/23/13	98	67	16.0	<0.24	0.24	<0.24	0.24	<0.24	0.7	<0.24	<0.24	<0.24	<0.24	NS	NS	NS
	6/12/14	48	120	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	0.7	<0.24	<0.24	<0.24	<0.24	NS	NS	NS
	11/5/14	150	49	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	NS	<0.24	
NAPHTHALENE (ug/L)	10/31/00	300		FP	1.5									<0.25	<0.25		
Enforcement Standard - 100 Preventive Action Limit - 10	1/19/07	FP	<0.43	<0.25	1.0	<0.25			120	<0.25				<0.25	<0.25		
	1/24/08	FP		NS	NS	NS	NS			NS	NS			<0.25	<0.25		
	7/14/09	270	FP	2	<0.25	<0.25	<0.25	<0.25	420	<0.50	<0.25	<0.25	<0.50	<0.25	<0.25	<0.50	
	10/13/09	290	FP	<0.50	NS	<0.50	NS		300	NS	NS	NS	NS	NS	NS	NS	
	1/19/10	320	FP	0.65	<0.25	<0.50	<0.25		410	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	4/14/10	210	FP	2.8	NS	<0.25	NS		38	NS	NS	NS	NS	NS	NS	NS	
	7/20/10	310	880	<0.50	<0.50	<0.50	<0.50		190	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
	9/30/10	370	FP	<0.50	NS	<0.50	NS			<0.50	NS	NS	NS	NS	NS	NS	
	5/3/11	360	630	<0.25	<0.25	<0.25	<0.25		205	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	
	10/19/11	390	960	<0.25	<0.25	15	0.42	81	<0.25	0.3	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	
	4/12/12	545	1,030	<2.5	<2.5	263	<2.5		136	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
	4/30/13	430	970	<2.4	<2.4	<2.4	<2.4		10	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	
	10/23/13	580	1,000	<2.4	<2.4	<2.4	<2.4		210	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	
	6/12/14	390	710	<2.4	<2.4	<2.4	<2.4			<2.4	<2.4	<2.4	<2.4	<2.4	NS	NS	
	11/5/14	770	1200 J	<2.4	<2.4	23.0	<2.4		<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	NS	<2.4
n-PROPYLBENZENE (ug/L)	10/31/00	220		FP	1.7									<0.25	<0.25		
	1/19/07	FP		FP	<0.50	0.89	<0.50		67	<0.50				<0.50	<0.50		
	1/24/08	FP		NS	NS	NS	NS			NS	NS			<0.50	<0.50		
	7/14/09	NS		NS	NS	NS	NS			NS	NS			<0.50	<0.50</		

PARAMETER	SAMPLE DATE	MW-1	MW-1R	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	P-8	MW-9	MW-10	MW-11	Olsons	Strey	Paps
TOLUENE ( ug / L )	10/31/00	21000		FP	130	<0.20	7.8	<0.20	7,400	<0.20				<0.10	<0.10	
	1/19/07	FP		FP	<0.11	<0.20								<0.20	<0.20	
	4/24/07	FP		FP	<0.11	<0.11	17	<0.11	2,900	<0.11						
	7/10/07	FP		FP	1.1	<0.11	0.44	<0.11	12,000	<0.11						
	10/17/07	FP		FP	0.19	<0.11	<0.11	<0.11	1,900	<0.11						
	1/24/08	FP		FP	NS	NS	NS	NS	NS	NS				<0.20	<0.20	
	7/14/09	20,000	FP	3.2	<0.25	<0.25	<0.25	<0.25	16,000	<0.25	<0.50	<0.50	<0.50	<0.25	<0.25	
	10/13/09	18,000	FP	<0.25	NS	<0.25	NS	14,000	NS	NS	NS	NS	NS	NS	NS	
	1/19/10	20,000	FP	3.6	<0.25	<0.25	<0.25	<0.25	19,000	<0.25	<0.25	16	<0.25	<0.25	NS	<0.25
	4/14/10	13,000	FP	5.9	NS	<0.25	NS	2,100	NS	NS	NS	NS	NS	NS	NS	NS
	7/20/10	18,000	22,000	<0.25	<0.25	<0.25	<0.25	6,400	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	9/30/10	19,000	FP	<0.25	NS	<0.25	NS	<0.25	NS	NS	NS	NS	NS	NS	NS	NS
	5/3/11	28,000	29,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	10/19/11	25,000	14,000	<0.50	<0.50	300	<0.50	5,000	<0.50	0.99	0.64	<0.50	<0.50	<0.50	<0.50	<0.50
	4/12/12	20,300	9,640	<0.25	<0.25	3240	<0.25	696	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	4/30/13	6,500	15,000	<0.33	<0.33	<0.33	<0.33	3.5	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
	10/23/13	8,600	6,000	0.91	<0.33	<0.33	<0.33	9,800	<0.33	<0.33	<0.33	<0.33	<0.33	NS	NS	NS
	6/12/14	6,900	12,000	4.50	<0.33	<0.33	<0.33	<0.33	0.36	0.36						
	11/5/14		12,000	7,300	<0.33	<0.33	42	<0.33	31	<0.33	<0.33	<0.33	<0.33	NS	<0.33	
1,2,4-TRIMETHYLBENZENE ( ug / L )	10/31/00	1,800		FP	6.2									<0.10	<0.10	
	1/19/07	FP		FP	<0.25	<0.20	3.2	<0.20	560	<0.20				<0.20	<0.20	
	4/24/07	FP		FP	<0.25	<0.25	5.3	<0.25	280	<0.25						
	7/10/07	FP		FP	<0.25	<0.25	0.31	<0.25	1,100	<0.25						
	10/17/07	FP		FP	<0.25	<0.25	<0.25	<0.25	180	<0.25				<0.20	<0.20	
	1/24/08	FP		FP	NS	NS	NS	NS	NS	NS				<0.20	<0.20	
	7/14/09	1,400	FP	5.6	<0.25	<0.25	<0.25	<0.25	1,500	<0.25	<0.20	<0.20	<0.20	<0.25	<0.20	<0.25
	10/13/09	1,400	FP	0.67	NS	<0.25	NS	1,200	NS	NS	NS	NS	NS	NS	NS	NS
	1/19/10	1,600	FP	11	<0.25	0.36	<0.25	1,400	<0.25	<0.25	0.64	<0.25	<0.25	NS	<0.25	
	4/14/10	1,200	FP	7.9	NS	<0.25	NS	160	NS	NS	NS	NS	NS	NS	NS	NS
	7/20/10	1,500	6,000	<0.25	<0.25	<0.25	<0.25	440	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
	9/30/10	1,500	FP	<0.25	NS	<0.25	NS	<0.25	NS	NS	NS	NS	NS	NS	NS	NS
	5/3/11	2,300	4,300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	10/19/11	2,400	6,200	0.59	<0.20	79	0.22	320	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	4/12/12	2,270	3,020	<0.25	<0.25	909	<0.25	525	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<0.25
	4/30/13	1,900	4,900	0.4	<0.30	<0.30	<0.30	14	0.94	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
	10/23/13	1,900	3,400	2.8	<0.30	2	1.9	740	<0.30	2.7	<0.30	<0.30	<0.30	NS	NS	NS
	6/12/14	2,100	3,700	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	NS	NS	NS
	11/5/14	2,400	5,600	<0.30	<0.30	63	<0.30	1.6	<0.30	<0.30	<0.30	<0.30	<0.30	NS	<0.30	
1,3,5-TRIMETHYLBENZENE ( ug / L )	10/31/00	440		FP	1.7									<0.10	<0.10	
	1/19/07	FP		FP	<0.19	<0.20	1.4	<0.20	150	<0.20				<0.20	<0.20	
	4/24/07	FP		FP	<0.19	<0.19	2.7	<0.19	75	<0.19						
	7/10/07	FP		FP	<0.19	<0.19	<0.19	<0.19	320	<0.19						
	10/17/07	FP		FP	<0.19	<0.19	<0.19	<0.19	54	<0.19						
	1/24/08	FP		FP	NS	NS	NS	NS	NS	NS				<0.20	<0.20	
	7/14/09	390	FP	1.9	<0.19	<0.19	<0.19	<0.19	430	<0.19	<0.20	<0.20	<0.20	<0.19	<0.19	
	10/13/09	390	FP	<0.19	NS	<0.19	NS	310	NS	NS	NS	NS	NS	NS	NS	NS
	1/19/10	480	FP	2.6	<0.19	<0.19	<0.19	<0.19	410	<0.19	<0.19	0.28	<0.19	<0.19	NS	<0.19
	4/14/10	330	FP	2.4	NS	<0.25	NS	42	NS	NS	NS	NS	NS	NS	NS	NS
	7/20/10	410	1,900	<0.19	<0.19	<0.19	<0.19	120	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
	9/30/10	430	FP	<0.19	NS	<0.19	NS	<0.19	NS	NS	NS	NS	NS	NS	NS	NS
	5/3/11	600	1,200	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	10/19/11	660	1,800	0.36	<0.20	30	<0.20	89	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	4/12/12	638	940	<0.25	<0.25	319	<0.25	151	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	NS	<0.25
	4/30/13	570	1,300	<0.30	<0.30	<0.30	<0.30	8.7	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
	10/23/13	540	1,000	1.5	<0.30	2.3	1.1	190	3.2	0.76	<0.30	<0.30	<0.30	NS	NS	NS
	6/12/14	560	1,000	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	NS	NS	NS
	11/5/14	700	1,800	<0.30	<0.30	22	<0.30	0.48	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	NS	<0.30
XYLEMES ( ug / L )	10/31/00	9200		FP	42									<0.25	<0.25	
	1/19/07	FP		FP	<0.39	<0.50	11	<0.50	3,900	<0.50				<0.50	<0.50	
	4/24/07	FP		FP	<0.39	<0.39	23	<0.39	1,700	<0.39						
	7/10/07	FP		FP	0.67	<0.39	0.73	<0.39	7,500	<0.39						
	10/17/07	FP		FP	<0.39	<0.39	<0.39	<0.39	1,100	<0.39						
	1/24/08	FP		FP	NS	NS	NS	NS	NS	NS				<0.50	<0.50	
	7/14/09	9,900	FP	19	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.50	<0.50	<0.50	<0.39	<0.50	<0.39
	10/13/09	9,500	FP	0.74	NS	<0.39	NS	8,200	NS	NS	NS	NS	NS	NS	NS	NS
	1/19/10	11,000	FP	80	<0.39	<0.39	<0.39	<0.39	1,100	<0.39	5.5	<0.39	<0.39	NS	<0.39	NS
	4/14/10	6,800	FP	28	NS	<0.39	NS	1,200	NS	NS	NS	NS	NS	NS	NS	NS
	7/20/10	9,900	20,000	<0.39	<0.39	<0.39	<0.39	3,600	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39
	9/30/10	10,000	FP	<0.39	NS	<0.39	NS	<0.39	NS	<0.39	NS	NS	NS	NS	NS	NS
	5/3/11	16,000	23,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	10/19/11	16,000	23,000	13	<0.50	330	<0.50	2,700	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	4/12/12	14,000	13,600	<0.25	<0.25	3420	<0.25	2,400	<0.25	<0.25	<0.					

## **FIGURES**



# Pap's General Store



0.3

0

0.13

0.3 Miles

NAD 1983 HARN Wisconsin TM

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1:7,920



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*Note: Not all sites are mapped.*



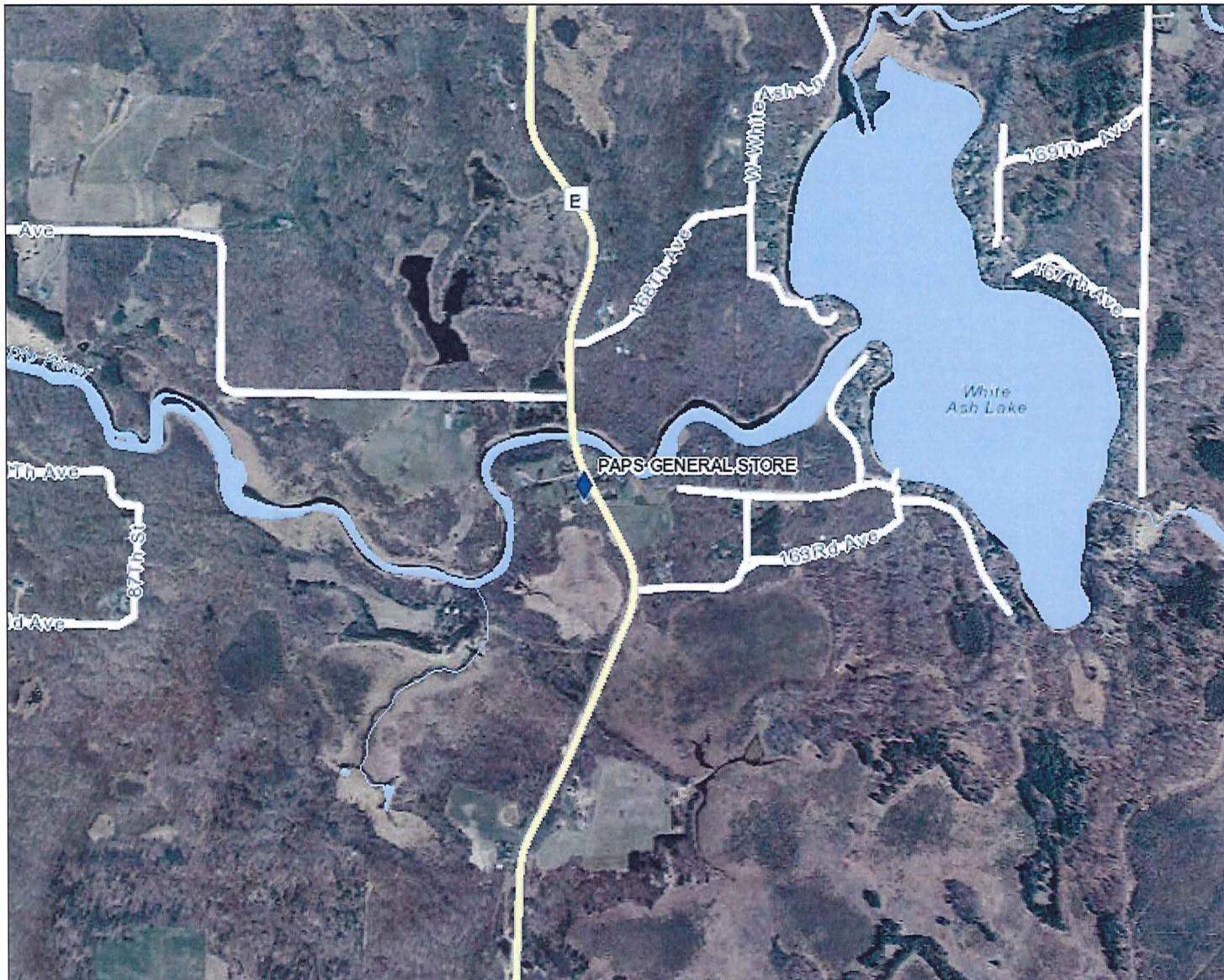
## Legend

- Open Site (ongoing cleanup)
  - Open Site Boundary
  - Closed Site (completed cleanup)
  - Closed Site Boundary
  - Airport
  - Great Lakes
  - Cities
  - Villages

## Notes



## Pap's General Store



0.5

0

0.25

0.5 Miles

NAD\_1983\_HARN\_Wisconsin\_TM

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1: 15,840



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Note: Not all sites are mapped.

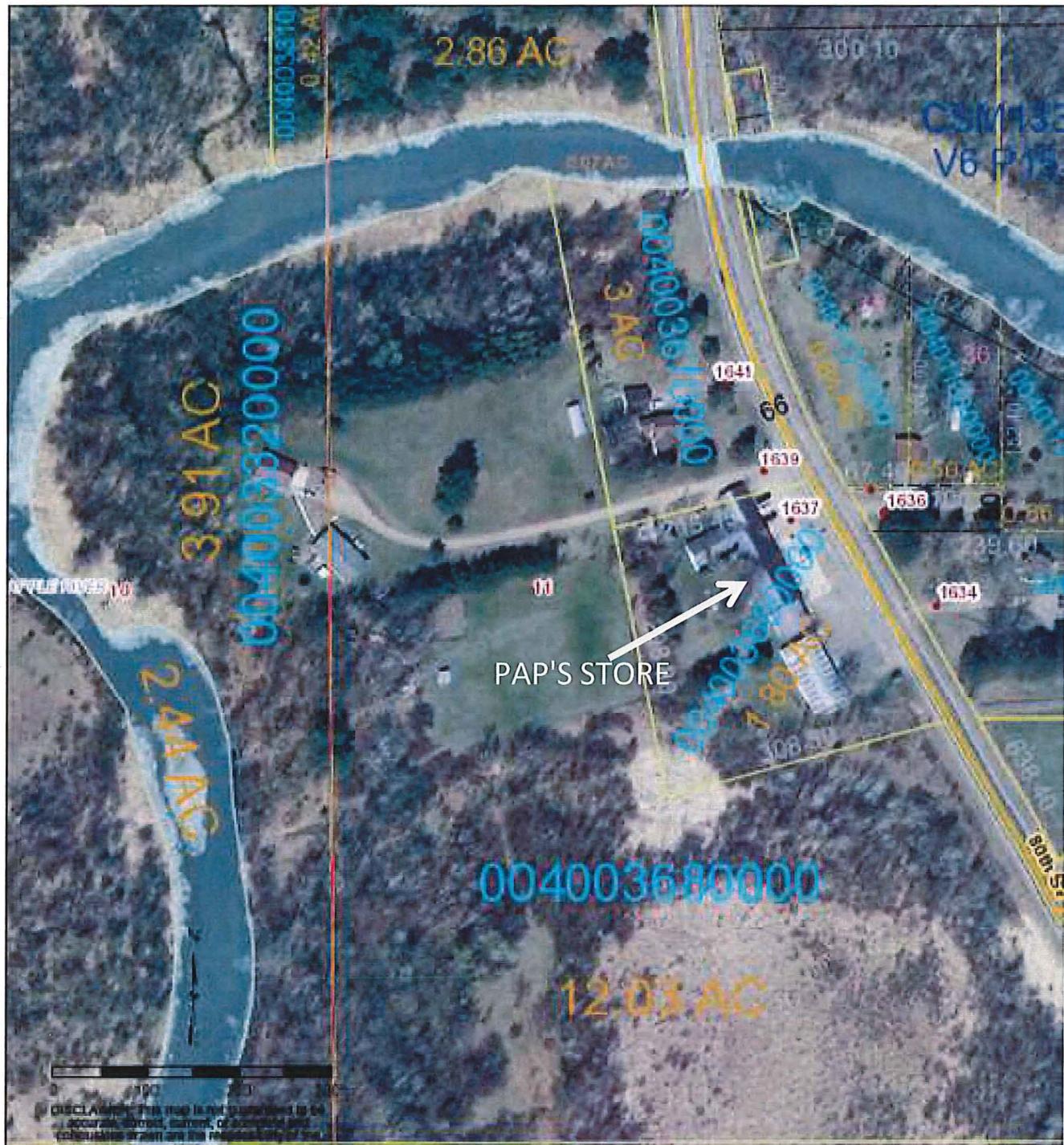


### Legend

- ◆ Open Site (ongoing cleanup)
- Open Site Boundary
- ◆ Closed Site (completed cleanup)
- Closed Site Boundary
- Airport
- 2010 Air Photos (WROC)
- Cities
- Villages

### Notes

Figure 2  
Aerial Photo  
Scale 1"=1/4 mile



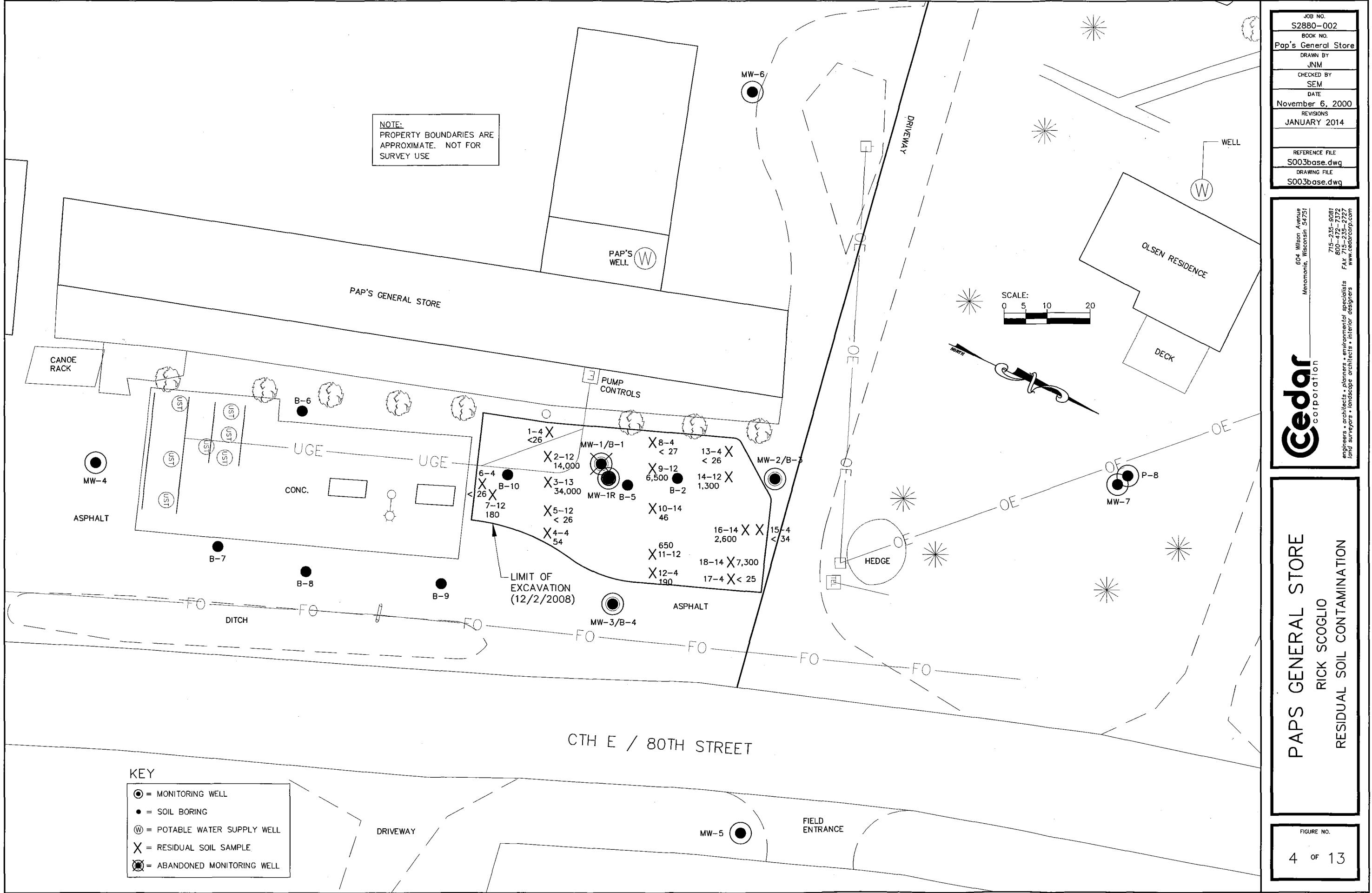
**LEGEND**

PROPERTY MAP  
TOWN OF APPLE RIVER  
POLK COUNTY, WI

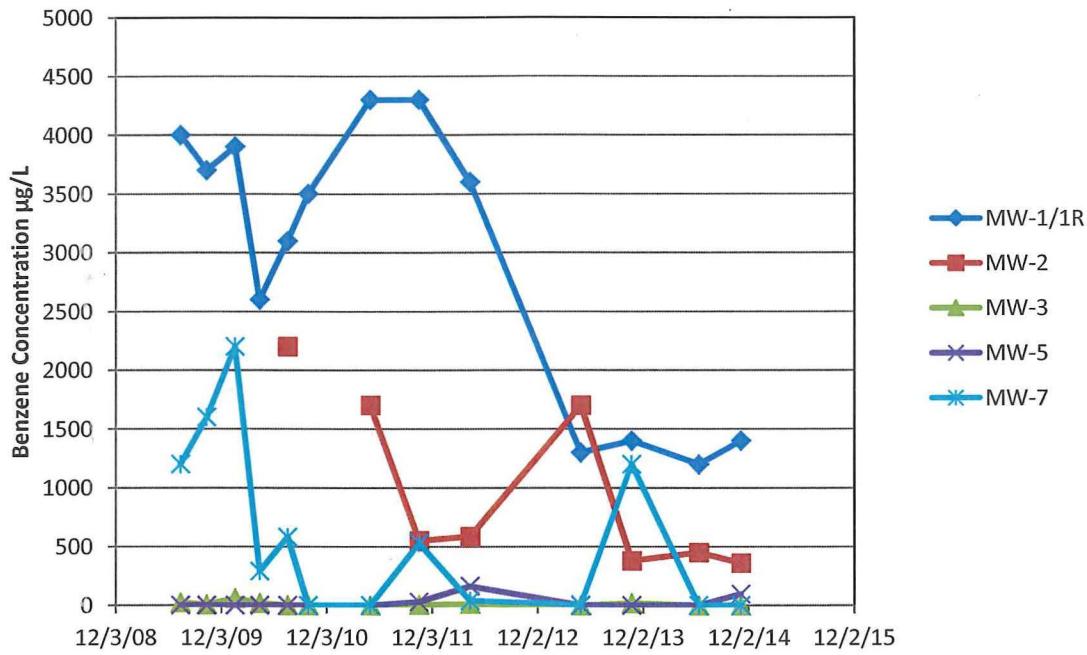


engineers • architects • planners • environmental specialists  
land surveyors • landscape architects • interior designers

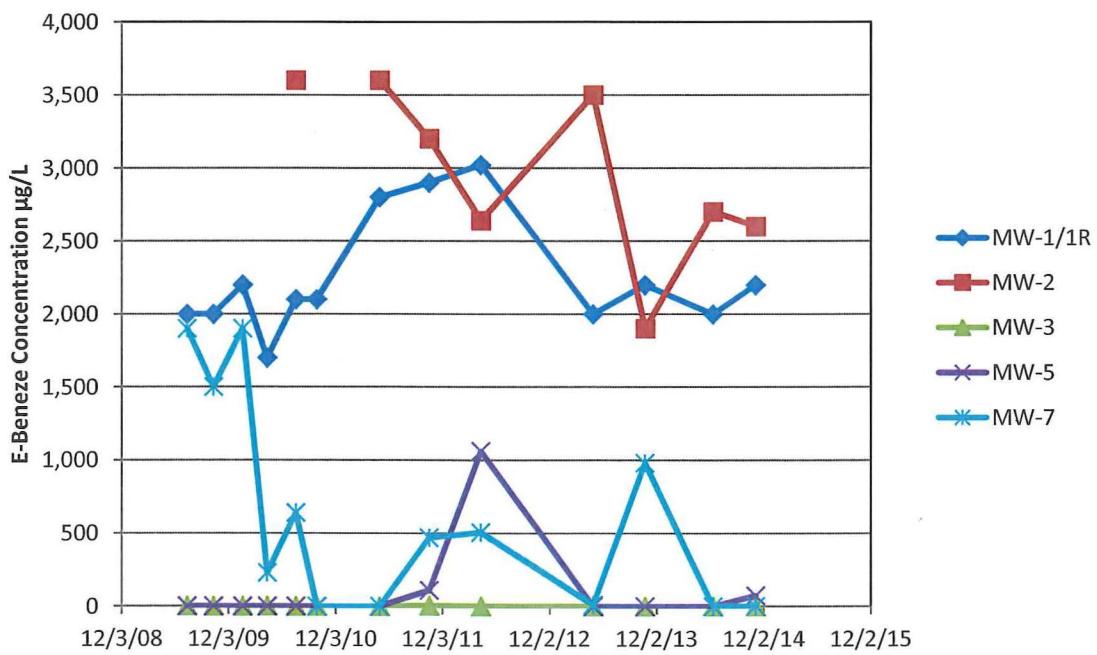
DRAWN BY Polk Co	SITE PROPERTY MAP	CHECKED BY sem
DATE 01/12/13	RICK SCOGLIO PAP'S GENERAL STORE BLASAM LAKE, WI	JOB NO.
REVISED BY sem		FIGURE 3
SCALE nts		

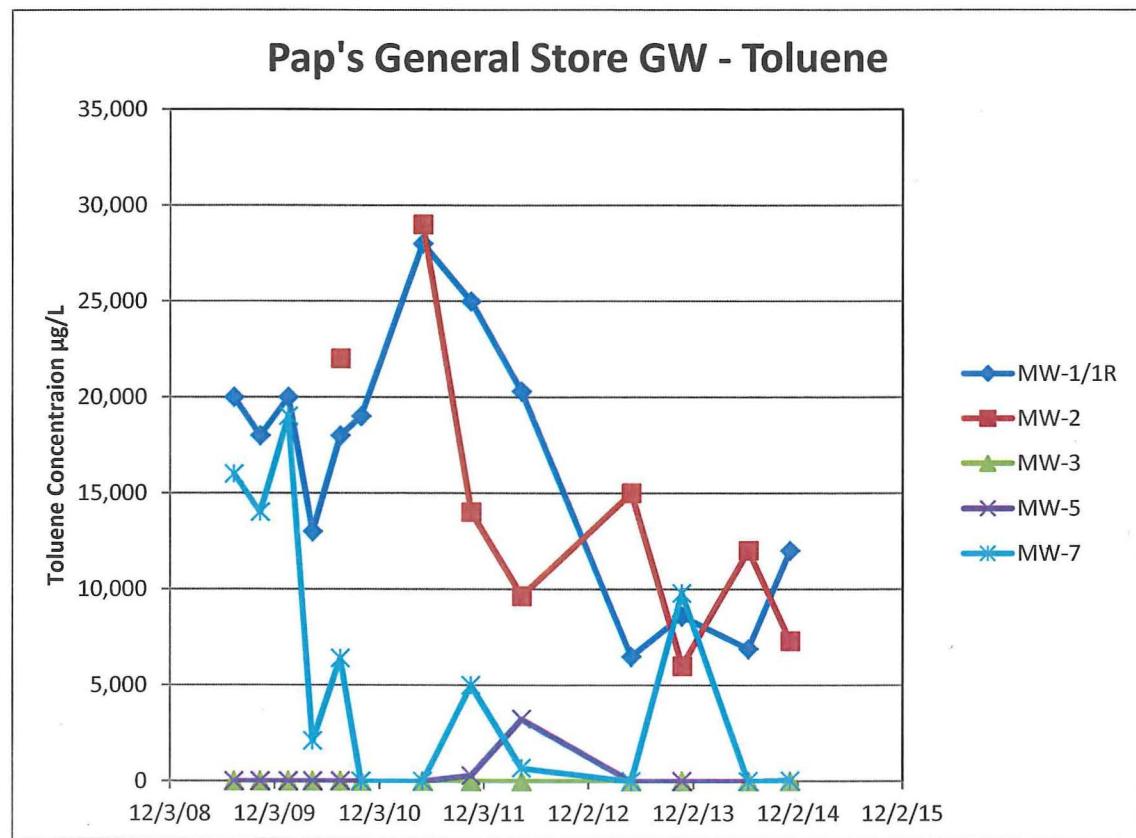
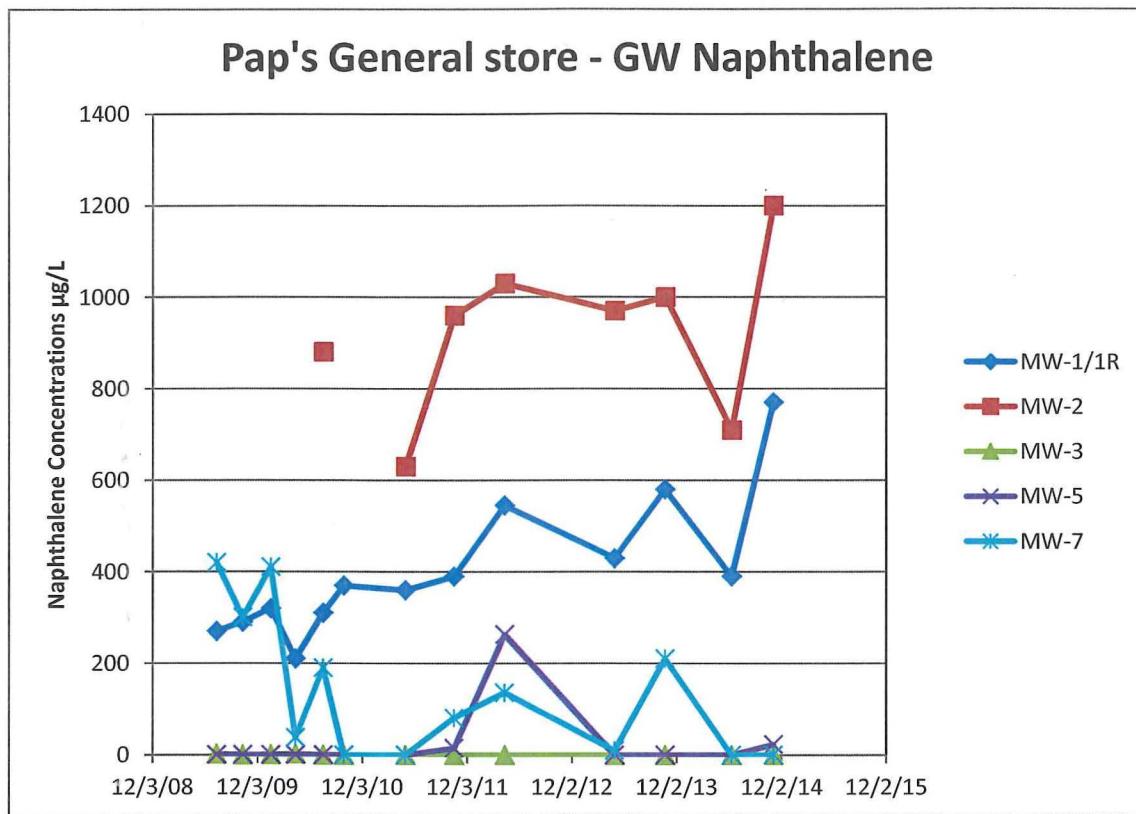


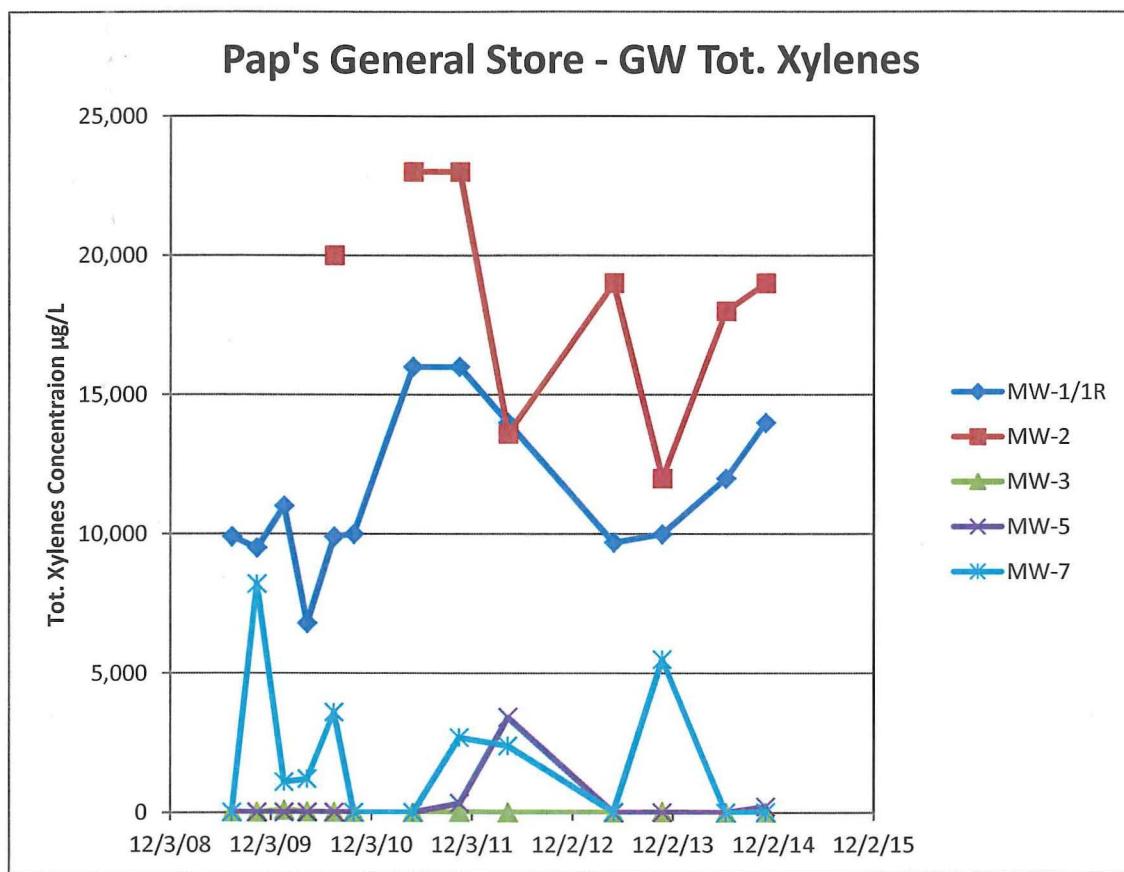
## Pap's General Store - GW Benzene



## Pap's General Store - GW E-Benzene



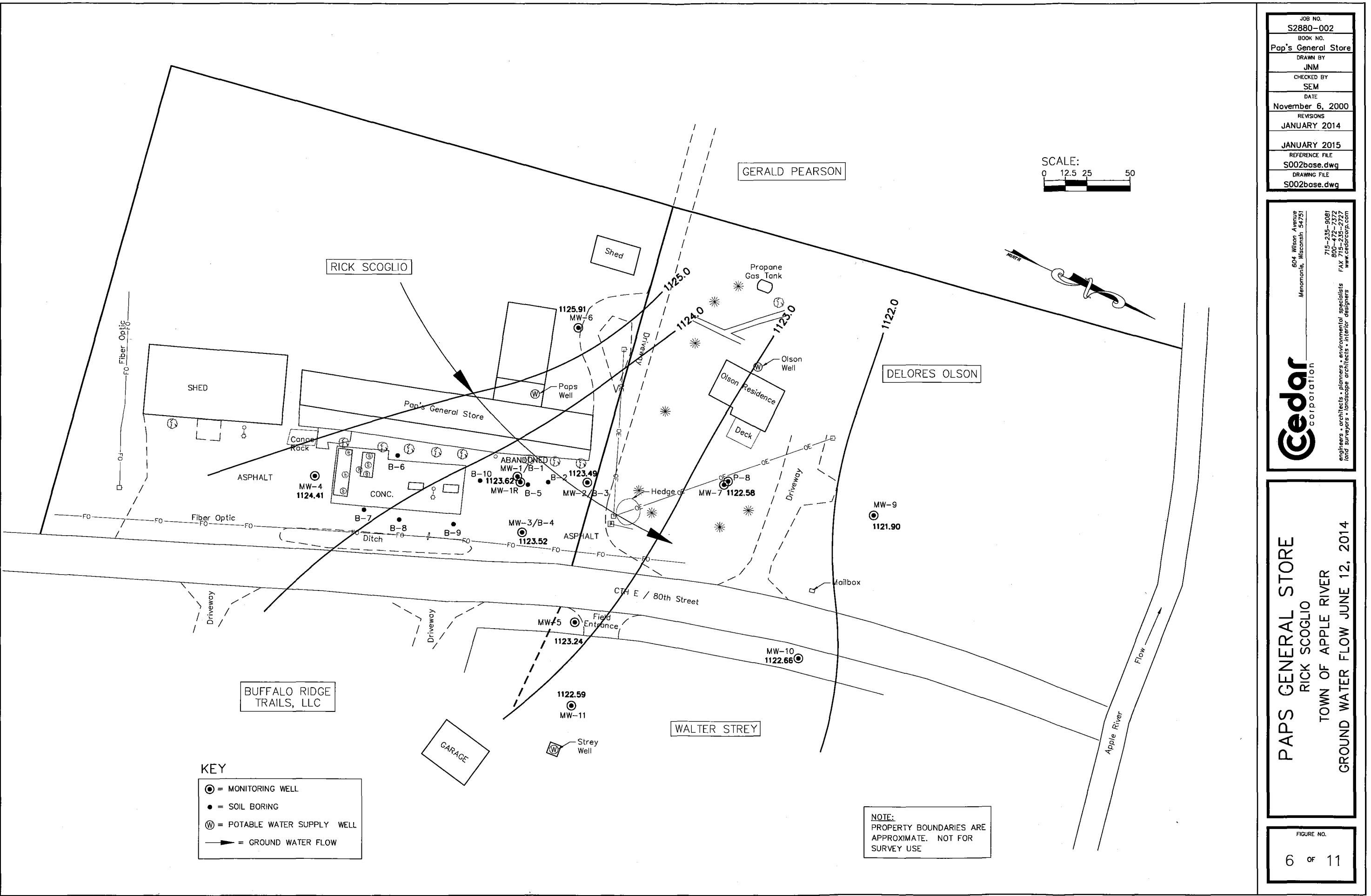


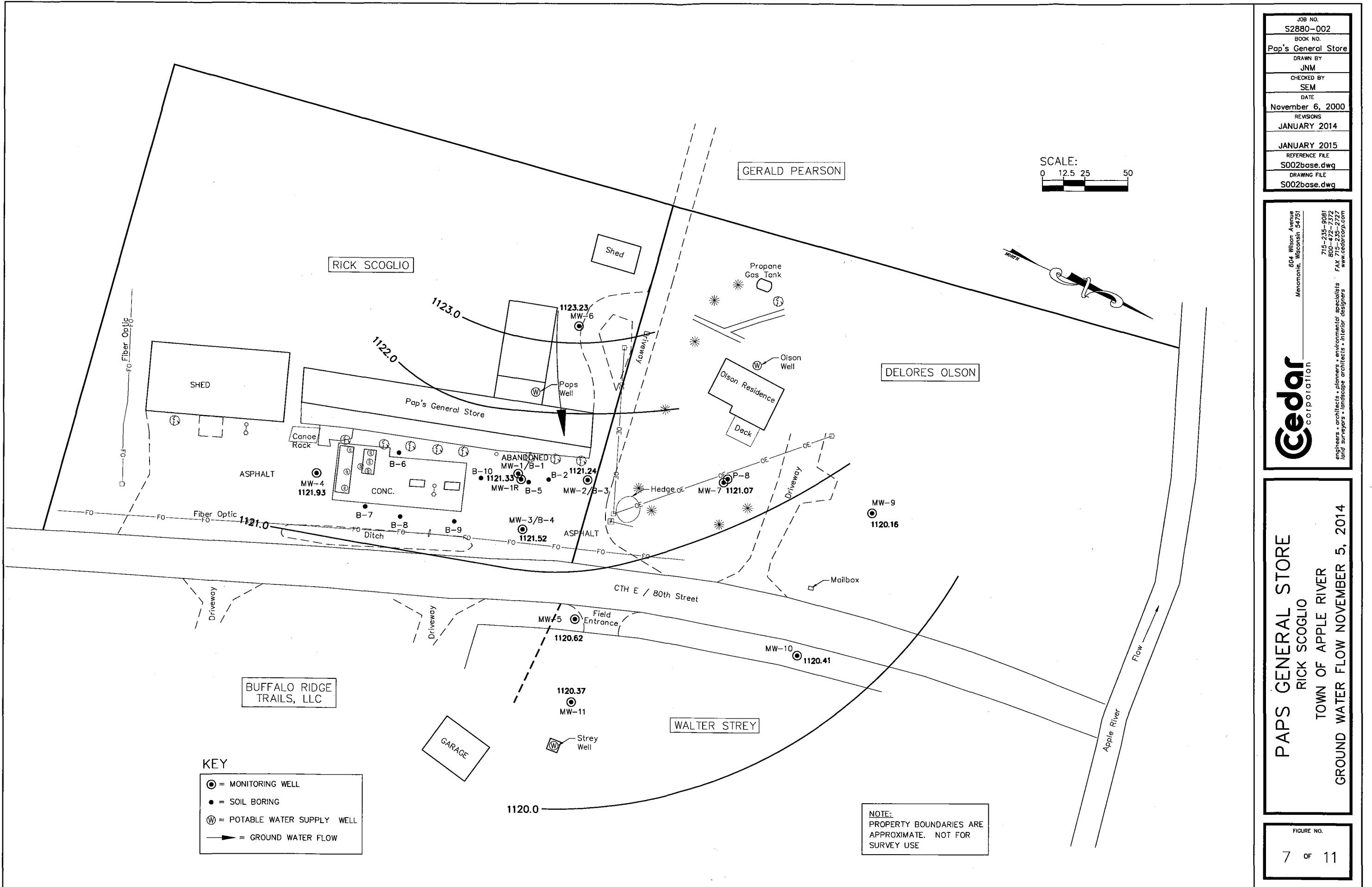


PLOT DATE : 2/10/2015 7:22 AM

DATA.DWG

PLOT BY : PAULETTE FENSKE





JOB NO.  
S2880-002  
BOOK NO.  
Pap's General Store  
DRAWN BY  
JNM  
CHECKED BY  
SEM  
DATE  
November 6, 2000  
REVISIONS  
JANUARY 2014  
JANUARY 2015  
REFERENCE FILE  
S002base.dwg  
DRAWING FILE  
S002base.dwg

604 Wilson Avenue  
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**RICK SCOGIO**  
**TOWN OF APPLE RIVER**  
**GROUND WATER FLOW NOVEMBER 5, 2014**

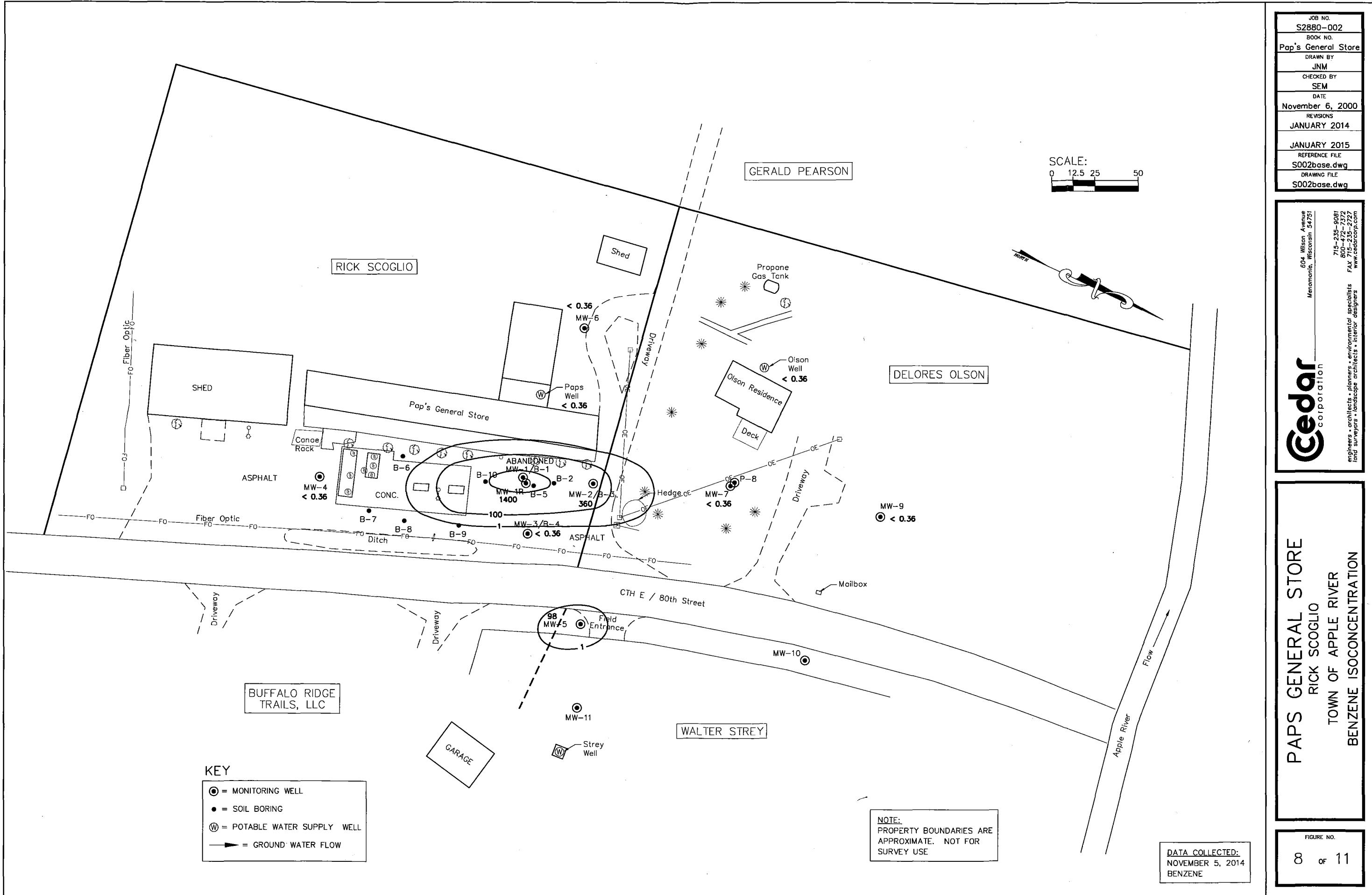
FIGURE NO.  
7 OF 11

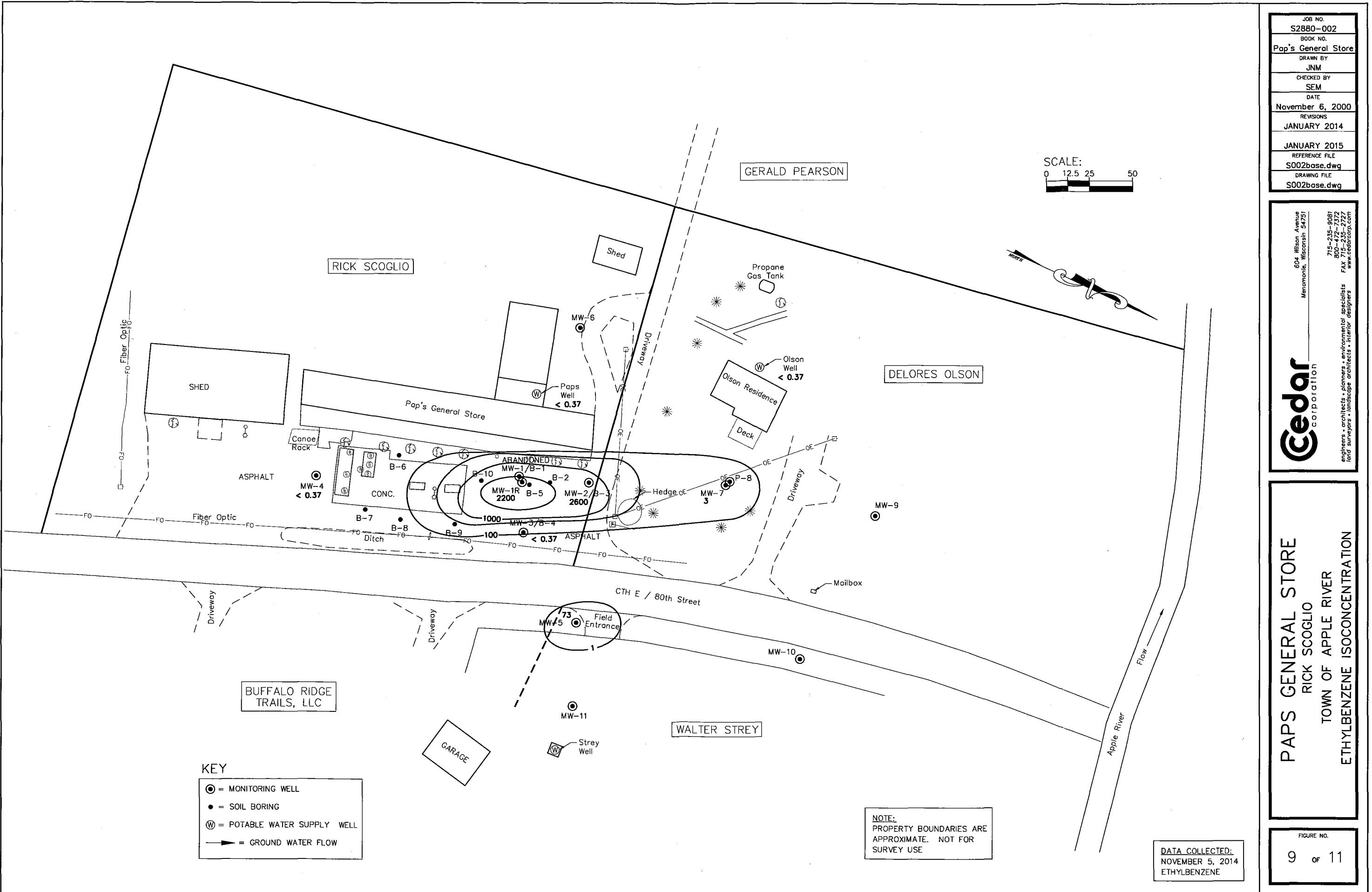
FILE NAME : \CLIENTS\SB880\SCOBLO RICK\003 PAPS REMEDIATION, 002 FINALIZE ENV INVESTIGATION.DWG\SCOBLOE..2014 DATA.DWG  
PLOT BY : PAULETTE FENSKE  
PLOT DATE : 2/10/2015 7:22 AM

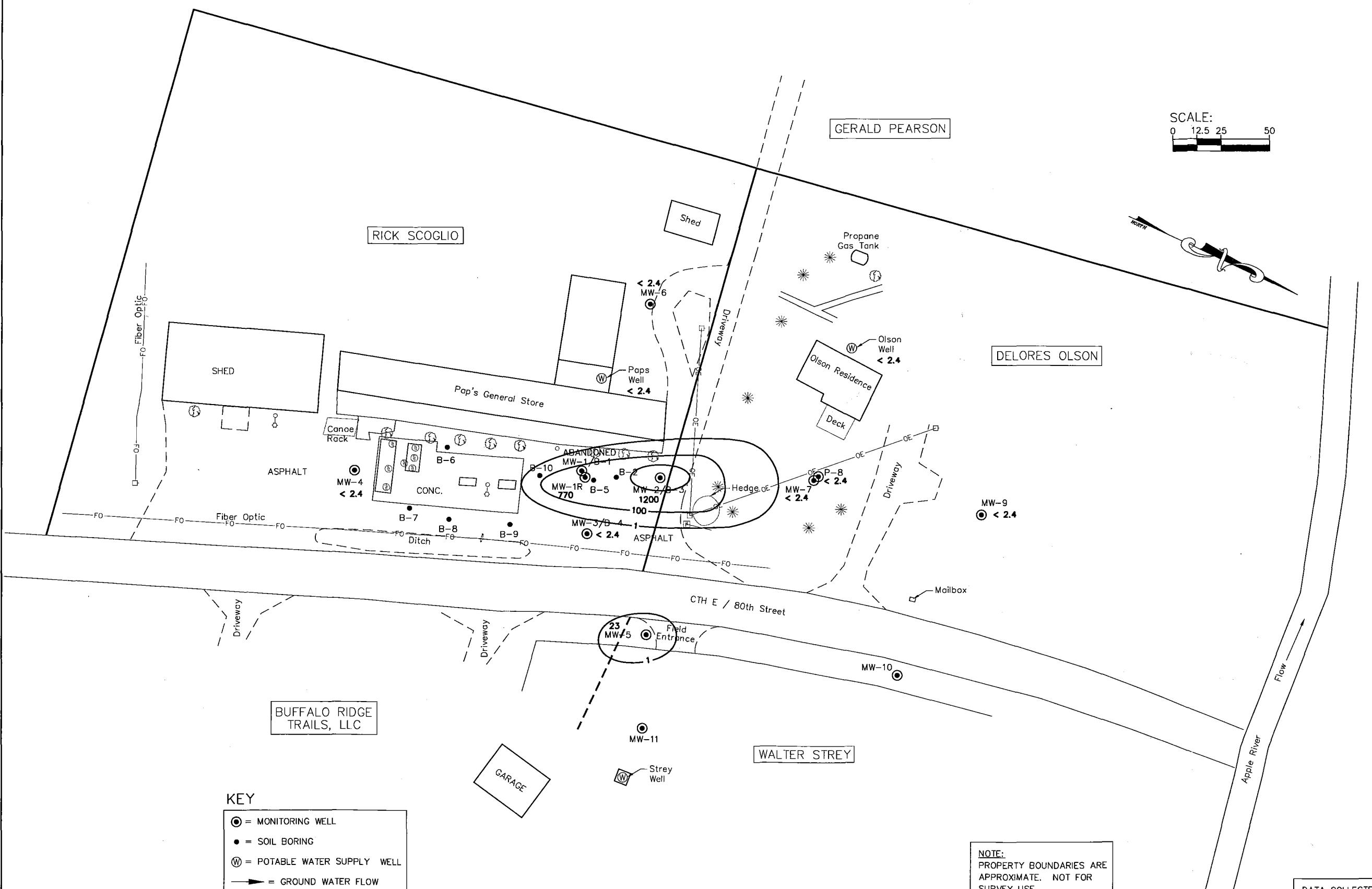
PLOT DATE : 2/10/2015 7:22 AM

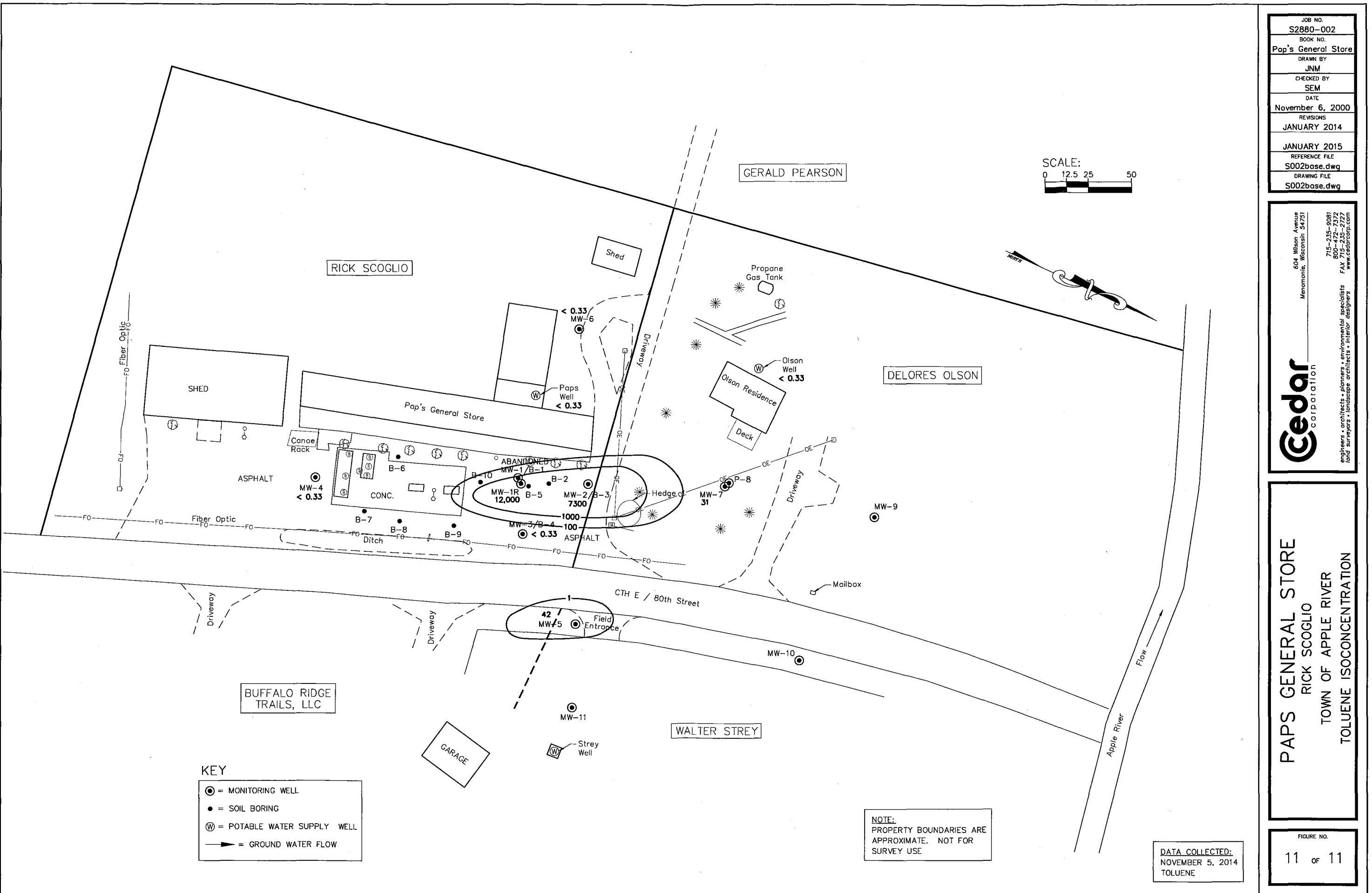
4/G

PLOT BY : PAULETTE FENSKE









JOB NO.  
S2880-002  
BOOK NO.  
Pop's General Store  
DRAWN BY  
JNM  
CHECKED BY  
SEM  
DATE  
November 6, 2000  
REVISIONS  
JANUARY 2014  
JANUARY 2015  
REFERENCE FILE  
S002base.dwg  
DRAWING FILE  
S002base.dwg

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**TOLUENE ISOCONCENTRATION**

FIGURE NO.  
11 OF 11  
DATA COLLECTED:  
NOVEMBER 5, 2014  
TOLUENE

## **LABORATORY ANALYTICAL REPORTS**

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-78831-1

Client Project/Site: Paps General Store - 2880

For:

Cedar Corporation

604 Wilson Avenue

Menomonie, Wisconsin 54751

Attn: Scott McCurdy

*Sandie Fredrick*

---

Authorized for release by:

6/24/2014 11:49:47 AM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

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The  
Expert

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[www.testamericainc.com](http://www.testamericainc.com)

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Case Narrative

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

---

**Job ID: 500-78831-1**

**Laboratory: TestAmerica Chicago**

**Narrative**

**Job Narrative**  
500-78831-1

**Comments**

No additional comments.

**Receipt**

The samples were received on 6/14/2014 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.4° C.

Except: One Vias for the following sample(s) was received broken or leaking: MW-9 (500-78831-6).

**GC VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**VOA Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

## Detection Summary

Client: Cedar Corporation  
 Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

### **Client Sample ID: MW-1R**

### **Lab Sample ID: 500-78831-1**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2100		50	30	ug/L	100		WDNR	Total/NA
1,3,5-Trimethylbenzene	560		50	30	ug/L	100		WDNR	Total/NA
Benzene	1200		50	36	ug/L	100		WDNR	Total/NA
Ethylbenzene	2000		50	37	ug/L	100		WDNR	Total/NA
Methyl tert-butyl ether	48		0.50	0.24	ug/L	1		WDNR	Total/NA
Naphthalene	390	J	500	240	ug/L	100		WDNR	Total/NA
Toluene	6900		50	33	ug/L	100		WDNR	Total/NA
Xylenes, Total	12000		150	58	ug/L	100		WDNR	Total/NA

### **Client Sample ID: MW-2**

### **Lab Sample ID: 500-78831-2**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	3700		50	30	ug/L	100		WDNR	Total/NA
1,3,5-Trimethylbenzene	1000		50	30	ug/L	100		WDNR	Total/NA
Benzene	450		50	36	ug/L	100		WDNR	Total/NA
Ethylbenzene	2700		50	37	ug/L	100		WDNR	Total/NA
Methyl tert-butyl ether	120		0.50	0.24	ug/L	1		WDNR	Total/NA
Naphthalene	710		500	240	ug/L	100		WDNR	Total/NA
Toluene	12000		50	33	ug/L	100		WDNR	Total/NA
Xylenes, Total	18000		150	58	ug/L	100		WDNR	Total/NA

### **Client Sample ID: MW-3**

### **Lab Sample ID: 500-78831-3**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0		0.50	0.36	ug/L	1		WDNR	Total/NA
Toluene	4.5		0.50	0.33	ug/L	1		WDNR	Total/NA
Xylenes, Total	4.5		1.5	0.58	ug/L	1		WDNR	Total/NA

### **Client Sample ID: MW-5**

### **Lab Sample ID: 500-78831-4**

No Detections.

### **Client Sample ID: MW-7**

### **Lab Sample ID: 500-78831-5**

No Detections.

### **Client Sample ID: MW-9**

### **Lab Sample ID: 500-78831-6**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.36	J	0.50	0.33	ug/L	1		WDNR	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

## Method Summary

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

Method	Method Description	Protocol	Laboratory
WDNR	Wisconsin - Gasoline Range Organics (GC)	WI-GRO	TAL NSH

**Protocol References:**

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

**Laboratory References:**

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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TestAmerica Chicago

## Sample Summary

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-78831-1	MW-1R	Water	06/12/14 12:15	06/14/14 09:45
500-78831-2	MW-2	Water	06/12/14 12:45	06/14/14 09:45
500-78831-3	MW-3	Water	06/12/14 11:45	06/14/14 09:45
500-78831-4	MW-5	Water	06/12/14 11:15	06/14/14 09:45
500-78831-5	MW-7	Water	06/12/14 10:15	06/14/14 09:45
500-78831-6	MW-9	Water	06/12/14 10:45	06/14/14 09:45

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TestAmerica Chicago

# Client Sample Results

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

**Client Sample ID: MW-1R**  
Date Collected: 06/12/14 12:15  
Date Received: 06/14/14 09:45

**Lab Sample ID: 500-78831-1**  
Matrix: Water

Method: WDNR - Wisconsin - Gasoline Range Organics (GC)									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	2100		50	30	ug/L			06/20/14 13:51	100
1,3,5-Trimethylbenzene	560		50	30	ug/L			06/20/14 13:51	100
Benzene	1200		50	36	ug/L			06/20/14 13:51	100
Ethylbenzene	2000		50	37	ug/L			06/20/14 13:51	100
Methyl tert-butyl ether	48		0.50	0.24	ug/L			06/19/14 16:19	1
Naphthalene	390 J		500	240	ug/L			06/20/14 13:51	100
Toluene	6900		50	33	ug/L			06/20/14 13:51	100
Xylenes, Total	12000		150	58	ug/L			06/20/14 13:51	100
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	95		80 -					06/19/14 16:19	1
a,a,a-Trifluorotoluene	100		80 -					06/20/14 13:51	100

**Client Sample ID: MW-2**  
Date Collected: 06/12/14 12:45  
Date Received: 06/14/14 09:45

**Lab Sample ID: 500-78831-2**  
Matrix: Water

Method: WDNR - Wisconsin - Gasoline Range Organics (GC)									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	3700		50	30	ug/L			06/20/14 17:23	100
1,3,5-Trimethylbenzene	1000		50	30	ug/L			06/20/14 17:23	100
Benzene	450		50	36	ug/L			06/20/14 17:23	100
Ethylbenzene	2700		50	37	ug/L			06/20/14 17:23	100
Methyl tert-butyl ether	120		0.50	0.24	ug/L			06/19/14 16:55	1
Naphthalene	710		500	240	ug/L			06/20/14 17:23	100
Toluene	12000		50	33	ug/L			06/20/14 17:23	100
Xylenes, Total	18000		150	58	ug/L			06/20/14 17:23	100
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	125		80 -					06/19/14 16:55	1
a,a,a-Trifluorotoluene	102		80 -					06/20/14 17:23	100

**Client Sample ID: MW-3**  
Date Collected: 06/12/14 11:45  
Date Received: 06/14/14 09:45

**Lab Sample ID: 500-78831-3**  
Matrix: Water

Method: WDNR - Wisconsin - Gasoline Range Organics (GC)									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 11:29	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 11:29	1
Benzene	1.0		0.50	0.36	ug/L			06/20/14 11:29	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			06/20/14 11:29	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			06/20/14 11:29	1
Naphthalene	<2.4		5.0	2.4	ug/L			06/20/14 11:29	1
Toluene	4.5		0.50	0.33	ug/L			06/20/14 11:29	1
Xylenes, Total	4.5		1.5	0.58	ug/L			06/20/14 11:29	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	101		80 -					06/20/14 11:29	1

TestAmerica Chicago

# Client Sample Results

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

**Client Sample ID: MW-5**

Date Collected: 06/12/14 11:15

Date Received: 06/14/14 09:45

**Lab Sample ID: 500-78831-4**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 12:05	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 12:05	1
Benzene	<0.36		0.50	0.36	ug/L			06/20/14 12:05	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			06/20/14 12:05	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			06/20/14 12:05	1
Naphthalene	<2.4		5.0	2.4	ug/L			06/20/14 12:05	1
Toluene	<0.33		0.50	0.33	ug/L			06/20/14 12:05	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			06/20/14 12:05	1
<i>Surrogate</i>							<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
a,a,a-Trifluorotoluene	102		80 -					06/20/14 12:05	1

**Client Sample ID: MW-7**

Date Collected: 06/12/14 10:15

Date Received: 06/14/14 09:45

**Lab Sample ID: 500-78831-5**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 12:40	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 12:40	1
Benzene	<0.36		0.50	0.36	ug/L			06/20/14 12:40	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			06/20/14 12:40	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			06/20/14 12:40	1
Naphthalene	<2.4		5.0	2.4	ug/L			06/20/14 12:40	1
Toluene	<0.33		0.50	0.33	ug/L			06/20/14 12:40	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			06/20/14 12:40	1
<i>Surrogate</i>							<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
a,a,a-Trifluorotoluene	104		80 -					06/20/14 12:40	1

**Client Sample ID: MW-9**

Date Collected: 06/12/14 10:45

Date Received: 06/14/14 09:45

**Lab Sample ID: 500-78831-6**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 10:54	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			06/20/14 10:54	1
Benzene	<0.36		0.50	0.36	ug/L			06/20/14 10:54	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			06/20/14 10:54	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			06/20/14 10:54	1
Naphthalene	<2.4		5.0	2.4	ug/L			06/20/14 10:54	1
Toluene	0.36 J		0.50	0.33	ug/L			06/20/14 10:54	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			06/20/14 10:54	1
<i>Surrogate</i>							<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
a,a,a-Trifluorotoluene	100		80 -					06/20/14 10:54	1

TestAmerica Chicago

## Definitions/Glossary

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

### Qualifiers

#### GC VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
D	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## QC Association Summary

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

### GC VOA

Analysis Batch: 171123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-78831-1	MW-1R	Total/NA	Water	WDNR	
500-78831-1	MW-1R	Total/NA	Water	WDNR	
500-78831-2	MW-2	Total/NA	Water	WDNR	
500-78831-2	MW-2	Total/NA	Water	WDNR	
500-78831-3	MW-3	Total/NA	Water	WDNR	
500-78831-4	MW-5	Total/NA	Water	WDNR	
500-78831-5	MW-7	Total/NA	Water	WDNR	
500-78831-6	MW-9	Total/NA	Water	WDNR	
LCS 490-171123/3	Lab Control Sample	Total/NA	Water	WDNR	
LCSD 490-171123/4	Lab Control Sample Dup	Total/NA	Water	WDNR	
MB 490-171123/6	Method Blank	Total/NA	Water	WDNR	

TestAmerica Chicago

## Surrogate Summary

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

### Method: WDNR - Wisconsin - Gasoline Range Organics (GC)

Matrix: Water

Prep Type: Total/NA

#### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT (80-)
500-78831-1	MW-1R	100
500-78831-1	MW-1R	95
500-78831-2	MW-2	102
500-78831-2	MW-2	125
500-78831-3	MW-3	101
500-78831-4	MW-5	102
500-78831-5	MW-7	104
500-78831-6	MW-9	100
LCS 490-171123/3	Lab Control Sample	105
LCSD 490-171123/4	Lab Control Sample Dup	108
MB 490-171123/6	Method Blank	105

#### Surrogate Legend

TFT = a,a,a-Trifluorotoluene

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TestAmerica Chicago

# QC Sample Results

Client: Cedar Corporation  
 Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

## Method: WDNR - Wisconsin - Gasoline Range Organics (GC)

**Lab Sample ID:** MB 490-171123/6

**Matrix:** Water

**Analysis Batch:** 171123

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
1,2,4-Trimethylbenzene	<0.30		0.50		0.30	ug/L			06/19/14 15:44		1
1,3,5-Trimethylbenzene	<0.30		0.50		0.30	ug/L			06/19/14 15:44		1
Benzene	<0.36		0.50		0.36	ug/L			06/19/14 15:44		1
Ethylbenzene	<0.37		0.50		0.37	ug/L			06/19/14 15:44		1
Methyl tert-butyl ether	<0.24		0.50		0.24	ug/L			06/19/14 15:44		1
Naphthalene	<2.4		5.0		2.4	ug/L			06/19/14 15:44		1
Toluene	<0.33		0.50		0.33	ug/L			06/19/14 15:44		1
Xylenes, Total	<0.58		1.5		0.58	ug/L			06/19/14 15:44		1
<b>Surrogate</b>		<b>MB</b>	<b>MB</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<i>a,a,a-Trifluorotoluene</i>		105				80 -				06/19/14 15:44	1

**Lab Sample ID:** LCS 490-171123/3

**Matrix:** Water

**Analysis Batch:** 171123

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike	LCS	LCS	Result	Qualifier	Unit	D	%Rec	Limits	%Rec.	Dil Fac
	Added	Result	Qualifier								
1,2,4-Trimethylbenzene	100	107		ug/L			107		60 - 131		
1,3,5-Trimethylbenzene	100	110		ug/L			110		70 - 130		
Benzene	100	95.6		ug/L			96		69 - 129		
Ethylbenzene	100	110		ug/L			110		70 - 130		
Methyl tert-butyl ether	100	97.9		ug/L			98		57 - 138		
m-Xylene & p-Xylene	200	216		ug/L			108		65 - 127		
Naphthalene	100	112		ug/L			112		69 - 133		
o-Xylene	100	108		ug/L			108		64 - 128		
Toluene	100	104		ug/L			104		66 - 127		
Xylenes, Total	300	324		ug/L			108				
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
<i>a,a,a-Trifluorotoluene</i>		105				80 -					

**Lab Sample ID:** LCSD 490-171123/4

**Matrix:** Water

**Analysis Batch:** 171123

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA

Analyte	Spike	LCSD	LCSD	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier								
1,2,4-Trimethylbenzene	100	107		ug/L			107		60 - 131	1	43
1,3,5-Trimethylbenzene	100	109		ug/L			109		70 - 130	1	20
Benzene	100	94.3		ug/L			94		69 - 129	1	33
Ethylbenzene	100	109		ug/L			109		70 - 130	1	35
Methyl tert-butyl ether	100	96.4		ug/L			96		57 - 138	1	40
m-Xylene & p-Xylene	200	214		ug/L			107		65 - 127	1	39
Naphthalene	100	111		ug/L			111		69 - 133	1	48
o-Xylene	100	107		ug/L			107		64 - 128	1	35
Toluene	100	103		ug/L			103		66 - 127	1	34
Xylenes, Total	300	321		ug/L			107				

TestAmerica Chicago

## QC Sample Results

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

### Method: WDNR - Wisconsin - Gasoline Range Organics (GC) (Continued)

Lab Sample ID: LCSD 490-171123/4

Matrix: Water

Analysis Batch: 171123

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
a,a,a-Trifluorotoluene	108		80 -

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TestAmerica Chicago

## Lab Chronicle

Client: Cedar Corporation  
Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

### Client Sample ID: MW-1R

Date Collected: 06/12/14 12:15

Date Received: 06/14/14 09:45

### Lab Sample ID: 500-78831-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	171123	06/19/14 16:19	FKG	TAL NSH
Total/NA	Analysis	WDNR		100	171123	06/20/14 13:51	FKG	TAL NSH

### Client Sample ID: MW-2

Date Collected: 06/12/14 12:45

Date Received: 06/14/14 09:45

### Lab Sample ID: 500-78831-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	171123	06/19/14 16:55	FKG	TAL NSH
Total/NA	Analysis	WDNR		100	171123	06/20/14 17:23	FKG	TAL NSH

### Client Sample ID: MW-3

Date Collected: 06/12/14 11:45

Date Received: 06/14/14 09:45

### Lab Sample ID: 500-78831-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	171123	06/20/14 11:29	FKG	TAL NSH

### Client Sample ID: MW-5

Date Collected: 06/12/14 11:15

Date Received: 06/14/14 09:45

### Lab Sample ID: 500-78831-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	171123	06/20/14 12:05	FKG	TAL NSH

### Client Sample ID: MW-7

Date Collected: 06/12/14 10:15

Date Received: 06/14/14 09:45

### Lab Sample ID: 500-78831-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	171123	06/20/14 12:40	FKG	TAL NSH

### Client Sample ID: MW-9

Date Collected: 06/12/14 10:45

Date Received: 06/14/14 09:45

### Lab Sample ID: 500-78831-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	171123	06/20/14 10:54	FKG	TAL NSH

#### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Chicago

## Certification Summary

Client: Cedar Corporation

Project/Site: Paps General Store - 2880

TestAmerica Job ID: 500-78831-1

### Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-14

### Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	998020430	08-31-14

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60466  
Phone: 708.534.5200 Fax: 708.534.



500-78831 COC

#### Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Requested Due Date

## Sample Disposal

[Return to Client](#)

Disposal by Landfill

## Archive for Months

(A fee may be assessed if samples are retained longer than 1 month)

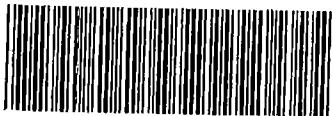
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Lab Courier
<i>Jayne</i>	<i>Cedar Corp</i>	<i>6/12/14</i>	<i>1630</i>	<i>Shawn Scott TA CRTI</i>	<i>6/14/14</i>	<i>0445</i>		
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped

Matrix Key	Client Comments	Lab Comments:
WW - Wastewater	SE - Sediment	
W - Water	SO - Soil	
S - Soil	L - Leachate	
Sl - Sludge	WI - Wipe	
MS - Miscellaneous	DW - Drinking Water	
OL - Oil	O - Other	
A - Air		

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6/24/2014 TAI-4124-500 (1209)

## COOLER RECEIPT



500-78831 Chain of Custody

Cooler Received/Opened On 6/17/2014@ 0830

1. Tracking # 3440 (last 4 digits, FedEx)Courier: FedEx IR Gun ID 120801422. Temperature of rep. sample or temp blank when opened: 2.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES...NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: one front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) DA7. Were custody seals on containers: YES  and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None10. Did all containers arrive in good condition (unbroken)? EF YES...NO...NA11. Were all container labels complete (#, date, signed, pres., etc)? 6-17-14 YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NAI certify that I unloaded the cooler and answered questions 7-14 (initial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) DA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) DAI certify that I attached a label with the unique LIMS number to each container (initial) DA

21. Were there Non-Conformance Issues at login? YES...NO Was a NCM generated? YES...NO...# \_\_\_\_\_

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Phone (708) 534-5200 Fax (708) 534-5211

## **Chain of Custody Record**

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTS

THE LEADERS IN ENVIRONMENTAL TESTS®

3/24/2

## Login Sample Receipt Checklist

Client: Cedar Corporation

Job Number: 500-78831-1

Login Number: 78831

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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## Login Sample Receipt Checklist

Client: Cedar Corporation

Job Number: 500-78831-1

Login Number: 78831

List Source: TestAmerica Nashville

List Number: 2

List Creation: 06/17/14 10:40 AM

Creator: Ford, Easton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Headspace larger than 1/4".
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-87699-1

Client Project/Site: Pap's Store - 2880

For:

Cedar Corporation

604 Wilson Avenue

Menomonie, Wisconsin 54751

Attn: Scott McCurdy



---

Authorized for release by:

11/20/2014 10:41:03 AM

Sandie Fredrick, Project Manager II

(920)261-1660

sandie.fredrick@testamericainc.com

### LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Case Narrative

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Job ID: 500-87699-1**

**Laboratory: TestAmerica Chicago**

### Narrative

Job Narrative  
500-87699-1

### Comments

No additional comments.

### Receipt

The samples were received on 11/12/2014 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

### GC VOA

Method(s) WI-GRO: Significant peaks, readily distinguished from background, were detected in the following sample(s) within five minutes after the end of the analytical window defined by the last component eluting in the Gasoline Range Organics (GRO) mix (i.e., Naphthalene): MW-1R (500-87699-1), MW-2 (500-87699-2).

Method(s) WI-GRO: Surrogate recovery for the following sample(s) was outside control limits: MW-2 (500-87699-2). Evidence of matrix interference is present. Re-analysis was performed for all analytes at a higher dilution. While the higher dilution controlled matrix effects, it resulted in overdilution of MTBE. Therefore MTBE will be reported from this analysis.

Method(s) WI-GRO: Continuing calibration verification (CCV) was outside of control limits for 1,2,4-Trimethylbenzene, Methyl tert-butyl ether, m- & p-xlenes, o-xylene, and total xlenes. Reanalysis is not available due to limited volume. The first result from batch 206621 is biased high due to carryover. The results in batch 206960 of all detected analytes from the previous analysis will be accepted herein. MW-10 (500-87699-10)

Method(s) WI-GRO: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 206960 recovered outside control limits for the following analytes: Methyl tert butyl ether

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

## Detection Summary

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

### Client Sample ID: MW-1R

### Lab Sample ID: 500-87699-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	2400		10	6.0	ug/L	20		WDNR	Total/NA
1,3,5-Trimethylbenzene	700		10	6.0	ug/L	20		WDNR	Total/NA
Benzene	1400		10	7.2	ug/L	20		WDNR	Total/NA
Ethylbenzene	2200		10	7.4	ug/L	20		WDNR	Total/NA
Methyl tert-butyl ether	150		10	4.8	ug/L	20		WDNR	Total/NA
Naphthalene	770		100	48	ug/L	20		WDNR	Total/NA
Toluene	12000		50	33	ug/L	100		WDNR	Total/NA
Xylenes, Total	14000		150	58	ug/L	100		WDNR	Total/NA

### Client Sample ID: MW-2

### Lab Sample ID: 500-87699-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	5600		130	75	ug/L	250		WDNR	Total/NA
1,3,5-Trimethylbenzene	1800		130	75	ug/L	250		WDNR	Total/NA
Benzene	360		130	90	ug/L	250		WDNR	Total/NA
Ethylbenzene	2600		130	93	ug/L	250		WDNR	Total/NA
Methyl tert-butyl ether	49		5.0	2.4	ug/L	10		WDNR	Total/NA
Naphthalene	1200	J	1300	600	ug/L	250		WDNR	Total/NA
Toluene	7300		130	83	ug/L	250		WDNR	Total/NA
Xylenes, Total	19000		380	150	ug/L	250		WDNR	Total/NA

### Client Sample ID: MW-3

### Lab Sample ID: 500-87699-3

No Detections.

### Client Sample ID: MW-4

### Lab Sample ID: 500-87699-4

No Detections.

### Client Sample ID: MW-5

### Lab Sample ID: 500-87699-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	63		0.50	0.30	ug/L	1		WDNR	Total/NA
1,3,5-Trimethylbenzene	22		0.50	0.30	ug/L	1		WDNR	Total/NA
Benzene	98		0.50	0.36	ug/L	1		WDNR	Total/NA
Ethylbenzene	73		0.50	0.37	ug/L	1		WDNR	Total/NA
Methyl tert-butyl ether	12		0.50	0.24	ug/L	1		WDNR	Total/NA
Naphthalene	23		5.0	2.4	ug/L	1		WDNR	Total/NA
Toluene	42		0.50	0.33	ug/L	1		WDNR	Total/NA
Xylenes, Total	210		1.5	0.58	ug/L	1		WDNR	Total/NA

### Client Sample ID: MW-6

### Lab Sample ID: 500-87699-6

No Detections.

### Client Sample ID: MW-7

### Lab Sample ID: 500-87699-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.6		0.50	0.30	ug/L	1		WDNR	Total/NA
1,3,5-Trimethylbenzene	0.48	J	0.50	0.30	ug/L	1		WDNR	Total/NA
Benzene	5.8		0.50	0.36	ug/L	1		WDNR	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

## Detection Summary

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1



4

### Client Sample ID: MW-7 (Continued)

Lab Sample ID: 500-87699-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	3.0		0.50	0.37	ug/L	1	WDNR		Total/NA
Toluene	31		0.50	0.33	ug/L	1	WDNR		Total/NA
Xylenes, Total	17		1.5	0.58	ug/L	1	WDNR		Total/NA

### Client Sample ID: PZ-8

Lab Sample ID: 500-87699-8

No Detections.

### Client Sample ID: MW-9

Lab Sample ID: 500-87699-9

No Detections.

### Client Sample ID: MW-10

Lab Sample ID: 500-87699-10

No Detections.

### Client Sample ID: MW-11

Lab Sample ID: 500-87699-11

No Detections.

### Client Sample ID: Paps Store

Lab Sample ID: 500-87699-12

No Detections.

### Client Sample ID: Olson

Lab Sample ID: 500-87699-13

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

## Method Summary

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

Method	Method Description	Protocol	Laboratory
WDNR	Wisconsin - Gasoline Range Organics (GC)	WI-GRO	TAL NSH

**Protocol References:**

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

**Laboratory References:**

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

## Sample Summary

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-87699-1	MW-1R	Water	11/05/14 13:45	11/12/14 09:10
500-87699-2	MW-2	Water	11/05/14 14:15	11/12/14 09:10
500-87699-3	MW-3	Water	11/05/14 13:15	11/12/14 09:10
500-87699-4	MW-4	Water	11/05/14 11:45	11/12/14 09:10
500-87699-5	MW-5	Water	11/05/14 12:15	11/12/14 09:10
500-87699-6	MW-6	Water	11/05/14 12:45	11/12/14 09:10
500-87699-7	MW-7	Water	11/05/14 10:45	11/12/14 09:10
500-87699-8	PZ-8	Water	11/05/14 11:15	11/12/14 09:10
500-87699-9	MW-9	Water	11/05/14 09:30	11/12/14 09:10
500-87699-10	MW-10	Water	11/05/14 09:50	11/12/14 09:10
500-87699-11	MW-11	Water	11/05/14 10:15	11/12/14 09:10
500-87699-12	Paps Store	Water	11/05/14 15:00	11/12/14 09:10
500-87699-13	Olson	Water	11/05/14 14:45	11/12/14 09:10

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TestAmerica Chicago

## Client Sample Results

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: MW-1R**  
Date Collected: 11/05/14 13:45  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-1**  
Matrix: Water

Method: WDNR - Wisconsin - Gasoline Range Organics (GC)									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	2400		10	6.0	ug/L			11/16/14 15:44	20
1,3,5-Trimethylbenzene	700		10	6.0	ug/L			11/16/14 15:44	20
Benzene	1400		10	7.2	ug/L			11/16/14 15:44	20
Ethylbenzene	2200		10	7.4	ug/L			11/16/14 15:44	20
Methyl tert-butyl ether	150		10	4.8	ug/L			11/16/14 15:44	20
Naphthalene	770		100	48	ug/L			11/16/14 15:44	20
Toluene	12000		50	33	ug/L			11/16/14 14:37	100
Xylenes, Total	14000		150	58	ug/L			11/16/14 14:37	100
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	106		80 -					11/16/14 14:37	100
a,a,a-Trifluorotoluene	125		80 -					11/16/14 15:44	20

**Client Sample ID: MW-2**  
Date Collected: 11/05/14 14:15  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-2**  
Matrix: Water

Method: WDNR - Wisconsin - Gasoline Range Organics (GC)									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	5600		130	75	ug/L			11/16/14 15:10	250
1,3,5-Trimethylbenzene	1800		130	75	ug/L			11/16/14 15:10	250
Benzene	360		130	90	ug/L			11/16/14 15:10	250
Ethylbenzene	2600		130	93	ug/L			11/16/14 15:10	250
Methyl tert-butyl ether	49		5.0	2.4	ug/L			11/16/14 16:18	10
Naphthalene	1200 J		1300	600	ug/L			11/16/14 15:10	250
Toluene	7300		130	83	ug/L			11/16/14 15:10	250
Xylenes, Total	19000		380	150	ug/L			11/16/14 15:10	250
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	103		80 -					11/16/14 15:10	250
a,a,a-Trifluorotoluene	52 X		80 -					11/16/14 16:18	10

**Client Sample ID: MW-3**  
Date Collected: 11/05/14 13:15  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-3**  
Matrix: Water

Method: WDNR - Wisconsin - Gasoline Range Organics (GC)									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 17:25	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 17:25	1
Benzene	<0.36		0.50	0.36	ug/L			11/16/14 17:25	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/16/14 17:25	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/16/14 17:25	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/16/14 17:25	1
Toluene	<0.33		0.50	0.33	ug/L			11/16/14 17:25	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/16/14 17:25	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	95		80 -					11/16/14 17:25	1

TestAmerica Chicago

# Client Sample Results

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: MW-4**  
Date Collected: 11/05/14 11:45  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-4**  
Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 17:58	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 17:58	1
Benzene	<0.36		0.50	0.36	ug/L			11/16/14 17:58	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/16/14 17:58	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/16/14 17:58	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/16/14 17:58	1
Toluene	<0.33		0.50	0.33	ug/L			11/16/14 17:58	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/16/14 17:58	1
<b>Surrogate</b>							<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	96		80 -					11/16/14 17:58	1

**Client Sample ID: MW-5**

Date Collected: 11/05/14 12:15  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-5**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	63		0.50	0.30	ug/L			11/16/14 18:32	1
1,3,5-Trimethylbenzene	22		0.50	0.30	ug/L			11/16/14 18:32	1
Benzene	98		0.50	0.36	ug/L			11/16/14 18:32	1
Ethylbenzene	73		0.50	0.37	ug/L			11/16/14 18:32	1
Methyl tert-butyl ether	12		0.50	0.24	ug/L			11/16/14 18:32	1
Naphthalene	23		5.0	2.4	ug/L			11/16/14 18:32	1
Toluene	42		0.50	0.33	ug/L			11/16/14 18:32	1
Xylenes, Total	210		1.5	0.58	ug/L			11/16/14 18:32	1
<b>Surrogate</b>							<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	141		80 -					11/16/14 18:32	1

**Client Sample ID: MW-6**

Date Collected: 11/05/14 12:45  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-6**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 19:05	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 19:05	1
Benzene	<0.36		0.50	0.36	ug/L			11/16/14 19:05	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/16/14 19:05	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/16/14 19:05	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/16/14 19:05	1
Toluene	<0.33		0.50	0.33	ug/L			11/16/14 19:05	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/16/14 19:05	1
<b>Surrogate</b>							<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	100		80 -					11/16/14 19:05	1

TestAmerica Chicago

## Client Sample Results

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: MW-7**

Date Collected: 11/05/14 10:45  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-7**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.6		0.50	0.30	ug/L			11/16/14 19:39	1
1,3,5-Trimethylbenzene	0.48 J		0.50	0.30	ug/L			11/16/14 19:39	1
Benzene	5.8		0.50	0.36	ug/L			11/16/14 19:39	1
Ethylbenzene	3.0		0.50	0.37	ug/L			11/16/14 19:39	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/16/14 19:39	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/16/14 19:39	1
Toluene	31		0.50	0.33	ug/L			11/16/14 19:39	1
Xylenes, Total	17		1.5	0.58	ug/L			11/16/14 19:39	1
<i>Surrogate</i>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene		96		80 -				11/16/14 19:39	1

**Client Sample ID: PZ-8**

Date Collected: 11/05/14 11:15  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-8**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 20:13	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 20:13	1
Benzene	<0.36		0.50	0.36	ug/L			11/16/14 20:13	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/16/14 20:13	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/16/14 20:13	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/16/14 20:13	1
Toluene	<0.33		0.50	0.33	ug/L			11/16/14 20:13	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/16/14 20:13	1
<i>Surrogate</i>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene		95		80 -				11/16/14 20:13	1

**Client Sample ID: MW-9**

Date Collected: 11/05/14 09:30  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-9**

Matrix: Water

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/17/14 01:48	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/17/14 01:48	1
Benzene	<0.36		0.50	0.36	ug/L			11/17/14 01:48	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/17/14 01:48	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/17/14 01:48	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/17/14 01:48	1
Toluene	<0.33		0.50	0.33	ug/L			11/17/14 01:48	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/17/14 01:48	1
<i>Surrogate</i>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene		92		80 -				11/17/14 01:48	1

TestAmerica Chicago

# Client Sample Results

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: MW-10**  
Date Collected: 11/05/14 09:50  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-10**  
Matrix: Water

## Method: WDNR - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/18/14 12:03	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/17/14 02:55	1
Benzene	<0.36		0.50	0.36	ug/L			11/17/14 02:55	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/17/14 02:55	1
Methyl tert-butyl ether	<0.24 *		0.50	0.24	ug/L			11/18/14 12:03	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/17/14 02:55	1
Toluene	<0.33		0.50	0.33	ug/L			11/17/14 02:55	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/18/14 12:03	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	90		80 -					11/17/14 02:55	1
a,a,a-Trifluorotoluene	98		80 -					11/18/14 12:03	1

**Client Sample ID: MW-11**

Date Collected: 11/05/14 10:15  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-11**

Matrix: Water

## Method: WDNR - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/17/14 03:29	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/17/14 03:29	1
Benzene	<0.36		0.50	0.36	ug/L			11/17/14 03:29	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/17/14 03:29	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/17/14 03:29	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/17/14 03:29	1
Toluene	<0.33		0.50	0.33	ug/L			11/17/14 03:29	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/17/14 03:29	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	95		80 -					11/17/14 03:29	1

**Client Sample ID: Paps Store**

Date Collected: 11/05/14 15:00  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-12**

Matrix: Water

## Method: WDNR - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/17/14 00:07	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/17/14 00:07	1
Benzene	<0.36		0.50	0.36	ug/L			11/17/14 00:07	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/17/14 00:07	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/17/14 00:07	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/17/14 00:07	1
Toluene	<0.33		0.50	0.33	ug/L			11/17/14 00:07	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/17/14 00:07	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	96		80 -					11/17/14 00:07	1

TestAmerica Chicago

## Client Sample Results

Client: Cedar Corporation  
 Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: Olson**

**Date Collected: 11/05/14 14:45**

**Date Received: 11/12/14 09:10**

**Lab Sample ID: 500-87699-13**

**Matrix: Water**

**Method: WDNR - Wisconsin - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 22:27	1
1,3,5-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/16/14 22:27	1
Benzene	<0.36		0.50	0.36	ug/L			11/16/14 22:27	1
Ethylbenzene	<0.37		0.50	0.37	ug/L			11/16/14 22:27	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/16/14 22:27	1
Naphthalene	<2.4		5.0	2.4	ug/L			11/16/14 22:27	1
Toluene	<0.33		0.50	0.33	ug/L			11/16/14 22:27	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/16/14 22:27	1
<b>Surrogate</b>		<b>%Recovery</b>		<b>Qualifier</b>	<b>Limits</b>		<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene		92			80 -			11/16/14 22:27	1

TestAmerica Chicago

## Definitions/Glossary

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

### Qualifiers

#### GC VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Reported value was between the limit of detection and the limit of quantitation.
X	Surrogate is outside control limits

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
#	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TestAmerica Chicago

## QC Association Summary

Client: Cedar Corporation  
 Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

### GC VOA

#### Analysis Batch: 206621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-87699-1	MW-1R	Total/NA	Water	WDNR	
500-87699-1	MW-1R	Total/NA	Water	WDNR	
500-87699-2	MW-2	Total/NA	Water	WDNR	
500-87699-2	MW-2	Total/NA	Water	WDNR	
500-87699-3	MW-3	Total/NA	Water	WDNR	
500-87699-4	MW-4	Total/NA	Water	WDNR	
500-87699-5	MW-5	Total/NA	Water	WDNR	
500-87699-6	MW-6	Total/NA	Water	WDNR	
500-87699-7	MW-7	Total/NA	Water	WDNR	
500-87699-8	PZ-8	Total/NA	Water	WDNR	
500-87699-9	MW-9	Total/NA	Water	WDNR	
500-87699-10	MW-10	Total/NA	Water	WDNR	
500-87699-11	MW-11	Total/NA	Water	WDNR	
500-87699-12	Paps Store	Total/NA	Water	WDNR	
500-87699-13	Olson	Total/NA	Water	WDNR	
LCS 490-206621/2	Lab Control Sample	Total/NA	Water	WDNR	
LCSD 490-206621/29	Lab Control Sample Dup	Total/NA	Water	WDNR	
MB 490-206621/18	Method Blank	Total/NA	Water	WDNR	
MB 490-206621/4	Method Blank	Total/NA	Water	WDNR	

#### Analysis Batch: 206960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-87699-10	MW-10	Total/NA	Water	WDNR	
LCS 490-206960/2	Lab Control Sample	Total/NA	Water	WDNR	
LCSD 490-206960/28	Lab Control Sample Dup	Total/NA	Water	WDNR	
MB 490-206960/4	Method Blank	Total/NA	Water	WDNR	

## Surrogate Summary

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

### Method: WDNR - Wisconsin - Gasoline Range Organics (GC)

Matrix: Water

Prep Type: Total/NA

#### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT (80-)
500-87699-1	MW-1R	106
500-87699-1	MW-1R	125
500-87699-2	MW-2	103
500-87699-2	MW-2	52 X
500-87699-3	MW-3	95
500-87699-4	MW-4	96
500-87699-5	MW-5	141
500-87699-6	MW-6	100
500-87699-7	MW-7	96
500-87699-8	PZ-8	95
500-87699-9	MW-9	92
500-87699-10	MW-10	90
500-87699-10	MW-10	98
500-87699-11	MW-11	95
500-87699-12	Paps Store	96
500-87699-13	Olson	92
LCS 490-206621/2	Lab Control Sample	105
LCS-490-206960/2	Lab Control Sample	105
LCSD 490-206621/29	Lab Control Sample Dup	94
LCSD 490-206960/28	Lab Control Sample Dup	87
MB 490-206621/18	Method Blank	96
MB 490-206621/4	Method Blank	100
MB 490-206960/4	Method Blank	102

#### Surrogate Legend

TFT = a,a,a-Trifluorotoluene

TestAmerica Chicago

## QC Sample Results

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

### Method: WDNR - Wisconsin - Gasoline Range Organics (GC)

**Lab Sample ID:** MB 490-206621/18

**Matrix:** Water

**Analysis Batch:** 206621

Analyte	MB	MB	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50		0.30	ug/L			11/16/14 21:53		1
1,3,5-Trimethylbenzene	<0.30		0.50		0.30	ug/L			11/16/14 21:53		1
Benzene	<0.36		0.50		0.36	ug/L			11/16/14 21:53		1
Ethylbenzene	<0.37		0.50		0.37	ug/L			11/16/14 21:53		1
Methyl tert-butyl ether	<0.24		0.50		0.24	ug/L			11/16/14 21:53		1
Naphthalene	<2.4		5.0		2.4	ug/L			11/16/14 21:53		1
Toluene	<0.33		0.50		0.33	ug/L			11/16/14 21:53		1
Xylenes, Total	<0.58		1.5		0.58	ug/L			11/16/14 21:53		1
<b>Surrogate</b>		MB	MB	%Recovery	Qualifier	<b>Limits</b>		D	Prepared	Analyzed	Dil Fac
<i>a,a,a-Trifluorotoluene</i>		96				80 -					

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Lab Sample ID:** MB 490-206621/4

**Matrix:** Water

**Analysis Batch:** 206621

Analyte	MB	MB	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50		0.30	ug/L			11/16/14 13:52		1
1,3,5-Trimethylbenzene	<0.30		0.50		0.30	ug/L			11/16/14 13:52		1
Benzene	<0.36		0.50		0.36	ug/L			11/16/14 13:52		1
Ethylbenzene	<0.37		0.50		0.37	ug/L			11/16/14 13:52		1
Methyl tert-butyl ether	<0.24		0.50		0.24	ug/L			11/16/14 13:52		1
Naphthalene	<2.4		5.0		2.4	ug/L			11/16/14 13:52		1
Toluene	<0.33		0.50		0.33	ug/L			11/16/14 13:52		1
Xylenes, Total	<0.58		1.5		0.58	ug/L			11/16/14 13:52		1
<b>Surrogate</b>		MB	MB	%Recovery	Qualifier	<b>Limits</b>		D	Prepared	Analyzed	Dil Fac
<i>a,a,a-Trifluorotoluene</i>		100				80 -					

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Lab Sample ID:** LCS 490-206621/2

**Matrix:** Water

**Analysis Batch:** 206621

Analyte	Spike	LCS	LCS	Result	Qualifier	Unit	D	%Rec	Limits	Dil Fac
	Added									
1,2,4-Trimethylbenzene		100		99.3		ug/L		99	60 - 131	
1,3,5-Trimethylbenzene		100		99.0		ug/L		99	70 - 130	
Benzene		100		94.6		ug/L		95	69 - 129	
Ethylbenzene		100		101		ug/L		101	70 - 130	
Methyl tert-butyl ether		100		91.4		ug/L		91	57 - 138	
m-Xylene & p-Xylene		200		186		ug/L		93	65 - 127	
Naphthalene		100		115		ug/L		115	69 - 133	
o-Xylene		100		97.3		ug/L		97	64 - 128	
Toluene		100		98.7		ug/L		99	66 - 127	
Xylenes, Total		300		283		ug/L		94		
<b>Surrogate</b>		LCS	LCS	%Recovery	Qualifier	<b>Limits</b>		D	Prepared	Analyzed
<i>a,a,a-Trifluorotoluene</i>		105				80 -				

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

TestAmerica Chicago

# QC Sample Results

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

## Method: WDNR - Wisconsin - Gasoline Range Organics (GC) (Continued)

**Lab Sample ID: LCSD 490-206621/29**

**Matrix: Water**

**Analysis Batch: 206621**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trimethylbenzene	100	95.2		ug/L	95	60 - 131	4	43	
1,3,5-Trimethylbenzene	100	94.9		ug/L	95	70 - 130	4	20	
Benzene	100	90.9		ug/L	91	69 - 129	4	33	
Ethylbenzene	100	98.1		ug/L	98	70 - 130	3	35	
Methyl tert-butyl ether	100	92.3		ug/L	92	57 - 138	1	40	
m-Xylene & p-Xylene	200	178		ug/L	89	65 - 127	4	39	
Naphthalene	100	109		ug/L	109	69 - 133	5	48	
o-Xylene	100	93.6		ug/L	94	64 - 128	4	35	
Toluene	100	94.7		ug/L	95	66 - 127	4	34	
Xylenes, Total	300	272		ug/L	91		4		

	LCSD	LCSD		
Surrogate	%Recovery	Qualifier	Limits	
a,a,a-Trifluorotoluene	94		80 -	

**Lab Sample ID: MB 490-206960/4**

**Matrix: Water**

**Analysis Batch: 206960**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<0.30		0.50	0.30	ug/L			11/18/14 11:30	1
Methyl tert-butyl ether	<0.24		0.50	0.24	ug/L			11/18/14 11:30	1
Xylenes, Total	<0.58		1.5	0.58	ug/L			11/18/14 11:30	1
Surrogate	MB %Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	102		80 -					11/18/14 11:30	1

**Lab Sample ID: LCS 490-206960/2**

**Matrix: Water**

**Analysis Batch: 206960**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
1,2,4-Trimethylbenzene	100	96.2		ug/L	96	60 - 131		
Methyl tert-butyl ether	100	90.7		ug/L	91	57 - 138		
m-Xylene & p-Xylene	200	183		ug/L	92	65 - 127		
o-Xylene	100	95.2		ug/L	95	64 - 128		
Xylenes, Total	300	278		ug/L	93			
Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits					
a,a,a-Trifluorotoluene	105		80 -					

**Lab Sample ID: LCSD 490-206960/28**

**Matrix: Water**

**Analysis Batch: 206960**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
1,2,4-Trimethylbenzene	100	70.8		ug/L	71	60 - 131	30	43	
Methyl tert-butyl ether	100	57.6 *		ug/L	58	57 - 138	45	40	

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

TestAmerica Chicago

## QC Sample Results

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

### Method: WDNR - Wisconsin - Gasoline Range Organics (GC) (Continued)

Lab Sample ID: LCSD 490-206960/28							Client Sample ID: Lab Control Sample Dup				
Matrix: Water							Prep Type: Total/NA				
Analysis Batch: 206960											
Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD	Limit
m-Xylene & p-Xylene		200	140		ug/L		70	65 - 127	27		39
o-Xylene		100	71.2		ug/L		71	64 - 128	29		35
Xylenes, Total		300	211		ug/L		70				27
Surrogate		LCSD %Recovery	LCSD Qualifier	LCSD Limits							
a,a,a-Trifluorotoluene		87		80 -							

## Lab Chronicle

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: MW-1R**  
**Date Collected: 11/05/14 13:45**  
**Date Received: 11/12/14 09:10**

**Lab Sample ID: 500-87699-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		100	206621	11/16/14 14:37	KML	TAL NSH
Total/NA	Analysis	WDNR		20	206621	11/16/14 15:44	KML	TAL NSH

**Client Sample ID: MW-2**  
**Date Collected: 11/05/14 14:15**  
**Date Received: 11/12/14 09:10**

**Lab Sample ID: 500-87699-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		250	206621	11/16/14 15:10	KML	TAL NSH
Total/NA	Analysis	WDNR		10	206621	11/16/14 16:18	KML	TAL NSH

**Client Sample ID: MW-3**  
**Date Collected: 11/05/14 13:15**  
**Date Received: 11/12/14 09:10**

**Lab Sample ID: 500-87699-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/16/14 17:25	KML	TAL NSH

**Client Sample ID: MW-4**  
**Date Collected: 11/05/14 11:45**  
**Date Received: 11/12/14 09:10**

**Lab Sample ID: 500-87699-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/16/14 17:58	KML	TAL NSH

**Client Sample ID: MW-5**  
**Date Collected: 11/05/14 12:15**  
**Date Received: 11/12/14 09:10**

**Lab Sample ID: 500-87699-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/16/14 18:32	KML	TAL NSH

**Client Sample ID: MW-6**  
**Date Collected: 11/05/14 12:45**  
**Date Received: 11/12/14 09:10**

**Lab Sample ID: 500-87699-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/16/14 19:05	KML	TAL NSH

TestAmerica Chicago

## Lab Chronicle

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: MW-7**

Date Collected: 11/05/14 10:45  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-7**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/16/14 19:39	KML	TAL NSH

**Client Sample ID: PZ-8**

Date Collected: 11/05/14 11:15  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-8**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/16/14 20:13	KML	TAL NSH

**Client Sample ID: MW-9**

Date Collected: 11/05/14 09:30  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-9**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/17/14 01:48	KML	TAL NSH

**Client Sample ID: MW-10**

Date Collected: 11/05/14 09:50  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-10**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/17/14 02:55	KML	TAL NSH
Total/NA	Analysis	WDNR		1	206960	11/18/14 12:03	KML	TAL NSH

**Client Sample ID: MW-11**

Date Collected: 11/05/14 10:15  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-11**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/17/14 03:29	KML	TAL NSH

**Client Sample ID: Paps Store**

Date Collected: 11/05/14 15:00  
Date Received: 11/12/14 09:10

**Lab Sample ID: 500-87699-12**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/17/14 00:07	KML	TAL NSH

TestAmerica Chicago

## Lab Chronicle

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

**Client Sample ID: Olson**

**Lab Sample ID: 500-87699-13**

Date Collected: 11/05/14 14:45  
Date Received: 11/12/14 09:10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	WDNR		1	206621	11/16/14 22:27	KML	TAL NSH

**Laboratory References:**

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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TestAmerica Chicago

## Certification Summary

Client: Cedar Corporation  
Project/Site: Pap's Store - 2880

TestAmerica Job ID: 500-87699-1

### Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-15 *

### Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	998020430	08-31-15

\* Certification renewal pending - certification considered valid.

TestAmerica Chicago

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604  
Phone: 708.534.5200 Fax: 708.534.



500-87699 COC

(optional)	
Report To	<i>Scott McCurdy</i>
Contact:	
Company:	
Address:	
Address:	
Phone:	
Fax:	
E-Mail:	
(optional)	
Bill To	
Contact:	
Company:	
Address:	
Address:	
Phone:	
Fax:	
PO#/Reference#	

## Chain of Custody Record

Lab Job #: 500-87699

Chain of Custody Number: \_\_\_\_\_

Page 1 of 2

Temperature °C of Cooler: 11/

- Preservative Key
1. HCl, Cool to 4°
  2. H2SO4, Cool to 4°
  3. HNO3, Cool to 4°
  4. NaOH, Cool to 4°
  5. NaOH/Zn, Cool to 4°
  6. NaHSO4
  7. Cool to 4°
  8. None
  9. Other

Client ID	Client Project #	Preservative	Parameter			Comments
				# of Containers	Matrix	
Lab ID	MS/MSD	Sample ID	Sampling	Date	Time	
1		MW-1R		11/5/14	1345	2 W X
2		MW-2			1415	1
3		MW-3			1315	1
4		MW-4			1145	1
5		MW-5			1215	1
6		MW-6			1245	1
7		MW-7			1045	1
8		PZ-8			1115	1
9		MW-9			930	1
10		MW-10			950	1

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other \_\_\_\_\_

Requested Due Date \_\_\_\_\_

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <i>Pete Sjor</i>	Company <i>Cedar Corp</i>	Date <i>11/5/14</i>	Time <i>1645</i>	Received By <i>Alma Scott TA-LH</i>	Company <i>TestAmerica</i>	Date <i>11/12/14</i>	Time <i>0910</i>	Lab Courier <input type="checkbox"/>
Relinquished By <i></i>	Company <i></i>	Date <i></i>	Time <i></i>	Received By <i></i>	Company <i></i>	Date <i></i>	Time <i></i>	Shipped <input checked="" type="checkbox"/>
Relinquished By <i></i>	Company <i></i>	Date <i></i>	Time <i></i>	Received By <i></i>	Company <i></i>	Date <i></i>	Time <i></i>	Hand Delivered <input type="checkbox"/>

Matrix Key

WW - Wastewater  
W - Water  
S - Soil  
SL - Sludge  
MS - Miscellaneous  
OL - Oil  
A - Air

Client Comments

SE - Sediment  
SO - Soil  
L - Leachate  
WI - Wipe  
DW - Drinking Water  
O - Other

Lab Comments:

11/20/2014

# TestAmerica

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THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

<p>Report To Contact: <u>Scott McCandy</u></p> <p>Company: _____</p> <p>Address: _____</p> <p>Address: _____</p> <p>Phone: _____</p> <p>Fax: _____</p> <p>E-Mail: _____</p>	<p>(optional)</p> <p>Bill To Contact: _____</p> <p>Company: _____</p> <p>Address: _____</p> <p>Address: _____</p> <p>Phone: _____</p> <p>Fax: _____</p> <p>PO#/Reference# _____</p>
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## ***Chain of Custody Record***

Lab Job #: 500-87699

Chain of Custody Number: \_\_\_\_\_

Page 2 of 2

Temperature °C of Cooler: \_\_\_\_\_

### Turnaround Time Required (Business Days)

## Sample Disposal

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

**Requested Due Date** \_\_\_\_\_

[Return to Client](#)

Disposal by Lab

Archive for \_\_\_\_\_ Month

(A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <i>Ron Sjogren</i>	Company <i>Cedar Corp</i>	Date <i>11/5/14</i>	Time <i>1645</i>	Received By <i>Shawn Shotts TA-CBT</i>	Company <i>Shawn Shotts TA-CBT</i>	Date <i>11/10/14</i>	Time <i>0910</i>	Lab Courier [ ]
Relinquished By <i>[Signature]</i>	Company [ ]	Date [ ]	Time [ ]	Received By [ ]	Company [ ]	Date [ ]	Time [ ]	Shipped <i>FedEx</i>
Relinquished By [ ]	Company [ ]	Date [ ]	Time [ ]	Received By [ ]	Company [ ]	Date [ ]	Time [ ]	Hand Delivered [ ]

## COOLER RECEIPT



500-87699 Chain of Custody

Cooler Received/Opened On : 11/13/2014 @ 0830

1. Tracking # 4337 (last 4 digits, FedEx)

Courier: Fed-ex IR Gun: 18290455

2. Temperature of rep. sample or temp blank when opened: 17 Degrees Celsius

3. If item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler?

If yes, how many and where:

Front

YES...NO...NA

5. Were the seals intact, signed, and dated correctly?

YES...NO...NA

6. Were custody papers Inside cooler?

YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial)7. Were custody seals on containers: YES  and Intact YES NO 

Were these signed and dated correctly?

YES...NO...NA

8. Packing mat'l used?  Bubblewrap  Plastic bag  Peanuts  Vermiculite  Foam Insert  Paper  Other None9. Cooling process:  Ice-pack  Ice (direct contact)  Dry ice  Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received?

YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # AAI certify that I unloaded the cooler and answered questions 7-14 (initial) AF

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) AF

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) AFI certify that I attached a label with the unique LIMS number to each container (initial) AF21. Were there Non-Conformance issues at login? YES  Was a NCM generated? YES  NO...#

TestAmerica Chicago

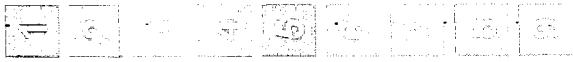
2417 Bond Street  
University Park, IL 60484  
Phone (708) 534-5200 Fax (708) 534-5211

## **Chain of Custody Record**

Loc: 500  
**87699**

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:	Lab PM: Fredrick, Sandie J			COC No: 500-56176.1		
Client Contact: Shipping/Receiving		Phone:	E-Mail: sandie.frederick@testamericainc.com			Page: Page 1 of 2		
Company: TestAmerica Laboratories, Inc		Analysis Requested				Job #: 500-87699-1		
Address: 2960 Foster Creighton Drive,		Due Date Requested: 11/21/2014					Preservation Codes:	
City: Nashville		TAT Requested (days):					A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA	
State, Zip: TN, 37204							M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2S03 R - Na2S2S03 S - H2S04 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Phone: 615-726-0177(Tel) 615-726-3404(Fax)		PO #:					Other:	
Email:		WO #:					Total Number of Samples:	
Project Name: Pap's Store - 2880		Project #: 50006556					Special Instructions/Note:	
Site:		SSOW#:						
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, T=tissue, A=air)	Field Filled by:	Sample ID#:	WI_GRO/6530B (MOD) WISO PVOC +
MW-1R (500-87699-1)		11/5/14	13:45 Central	Water	X			
MW-2 (500-87699-2)		11/5/14	14:15 Central	Water	X			
MW-3 (500-87699-3)		11/5/14	13:15 Central	Water	X			
MW-4 (500-87699-4)		11/5/14	11:45 Central	Water	X			
MW-5 (500-87699-5)		11/5/14	12:15 Central	Water	X			
MW-6 (500-87699-6)		11/5/14	12:45 Central	Water	X			
MW-7 (500-87699-7)		11/5/14	10:45 Central	Water	X			
PZ-8 (500-87699-8)		11/5/14	11:15 Central	Water	X			
MW-9 (500-87699-9)		11/5/14	09:30 Central	Water	X			
MW-10 (500-87699-10)		11/5/14	09:50 Central	Water	X			
MW-11 (500-87699-11)		11/5/14	10:15 Central	Water	X			
Possible Hazard Identification				Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)				
Unconfirmed				<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months	
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:				
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:				
Relinquished by:	<i>Sandie</i>	Date/Time: <i>11/12/14 1600</i>	Company: <i>TAL</i>	Received by: <i>STL</i>	1.7	Date/Time: <i>11-12-14 08:30</i>	Company: <i>TAN</i>	
Relinquished by:		Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:		Date/Time:	Company	Received by:		Date/Time:	Company	
Custody Seals Intact: △ Yes △ No	Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:				



TestAmerica Chicago

2417 Bond Street  
University Park, IL 60484  
Phone (708) 534-5200 Fax (708) 534-5211

## **Chain of Custody Record**

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

11/20/2014

## Login Sample Receipt Checklist

Client: Cedar Corporation

Job Number: 500-87699-1

Login Number: 87699

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L.

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: Cedar Corporation

Job Number: 500-87699-1

Login Number: 87699

List Source: TestAmerica Nashville

List Number: 2

List Creation: 11/13/14 03:41 PM

Creator: Ford, Easton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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