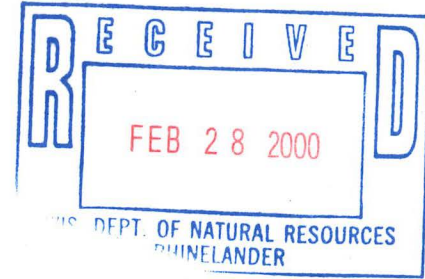




*Paula: please site
with other DOT
staff for Merrill
Cleaners
(This is not a site)*

February 24, 2000

Wisconsin Department of Natural Resources
Attn: Mr. Bill Schultz
107 Sutliff Avenue
Rhineland, WI 54501-3349



Subject: Subsurface Investigation / **Geoprobe™** Installation
The Cleaners of Merrill
219 East Second Street
Merrill, Wisconsin
Maxim Project #9914200

Dear Mr. Schultz:

In conjunction with the city of Merrill's Highway 64 (East Second Street) roadway expansion project, abbreviated Phase 2 site assessments were conducted in the fall of 1998 by Strand Associates, Inc., in the highway right-of-way at select locations along East Second Street in the city of Merrill, Wisconsin. The Cleaners of Merrill site, owned and operated by Mr. Gary Schuster, was one of the locations assessed by Strand. Phase 2 assessment results indicated a concentration of toluene [3.1 parts-per-million (ppm)] in excess of the NR 720 1.5 ppm toluene cleanup standard was present in one soil boring soil sample (SB-7) collected from 10-12 feet below land surface (bls). SB-7 was installed at the northeast corner of Mr. Schuster's property in the highway right-of-way (Figure 1). A concentration of tetrachloroethene [7.8 parts-per-billion (ppb)] in excess of the NR 140 5 ppb tetrachloroethene (PCE) enforcement standard (ES) was detected in the groundwater sample collected from soil boring (SB-8) installed near the northwest corner of Mr. Schuster's property in the highway right-of-way (Figure 1).

In response to a letter from the Department of Natural Resources requesting further investigation of the dry cleaning solvent and petroleum contamination identified in Strand's assessment, Maxim Technologies, Inc.® (Maxim), conducted additional subsurface investigative activities for Mr. Gary Schuster. On December 30, 1999, Maxim oversaw the installation of five **Geoprobe™** borings performed by SGS, Inc., Merrill, Wisconsin, at various locations around The Cleaners site including near the previously installed soil borings. Maxim collected both soil and groundwater samples from each probe with the exception of GP-4, from which a groundwater sample could not be collected due to insufficient sample volume.

Results

Soil samples were submitted for the analysis of gasoline range organics/petroleum volatile organic compounds (GRO/PVOC) and lead (Pb). GRO/PVOC compound concentrations were not detected in excess of corresponding NR 720 residual contaminant levels for any of the five soil probe soil samples. In particular, soil analytical results from GP-1 (19-21 feet bls) placed approximately 1 foot west of SB-7 (which previously exhibited toluene contamination) indicated toluene was not present above the laboratory limit of detection (<0.025 ppm). Soil analytical results also indicated that with the exception of GP-3, concentrations of lead were not detected in excess of the NR 720 50 ppm non-industrial direct contact standard. GP-3, installed in the former 510 gallon leaded gasoline UST grave, exhibited an elevated lead concentration of 117 ppm. Additional results from synthetic precipitation leaching



procedure (SPLP) analysis on GP-3 soil indicate that an in-situ soil concentration of 117 ppm lead may not be fully protective of groundwater since GP-3 exhibited a SPLP-lead result of 17 ppb, which exceeds the 1.5 ppb NR 140 preventive action limit (PAL) and the 15 ppb NR 140 enforcement standard (ES) (Table 1).

Groundwater samples were submitted for the analysis of volatile organic compounds (VOC). A comparison between GP-2 (placed approximately 1-2 feet east of SB-8) and SB-8 which previously exhibited PCE contamination, indicated that PCE (0.733 ppb) was not present in excess of the 5 ppb NR 140 ES. However, GP-3 exhibited a PCE concentration (13.3 ppb) in excess of the ES. No other VOC compounds were detected in excess of corresponding NR 140 standards in any of the remaining soil probes (Table 2).

Conclusions/Recommendations

Based on the close proximity of WDNR listed project sites to The Cleaners site, the nature of the sandy subsurface soils, the analytical results to date indicating site soils are not impacted with petroleum compounds, and given that groundwater is most likely flowing to the south toward the Prairie River, it is likely that the petroleum contamination (toluene) detected in the initial assessment originated from an off-site source. And although an isolated groundwater PCE concentration has been detected in excess of the NR 140 ES, analytical results to date support the conclusion that off-site migration does not appear to be occurring as groundwater samples collected from the perimeter of the property did not exhibit solvent impaction. In addition, various contaminant attenuating processes must be occurring as evidenced by the initial detection of PCE in the groundwater collected from SB-8 in November 1998 and the subsequent groundwater analysis conducted at GP-2 in December 1999 which indicated PCE was not present above the laboratory limit of detection. Lastly, the localized identification of lead in the soil at GP-3 (12-16 feet bls) does not pose a threat of direct contact, however a threat to the groundwater may exist based on SPLP results.

Therefore, based on the minimal degree and extent of lead and PCE impaction identified at The Cleaners site, considering it has been operated as a dry cleaning facility for approximately 30 years, and the apparent isolation of the contamination to within the property boundary, Maxim believes extensive remedial clean-up actions are not warranted. However, on behalf of Mr. Gary Schuster, Maxim respectfully requests WDNR review of site information collected to date, in order to determine whether or not the site could be submitted for a type of restricted case closure (such as with a property deed instrument).

If you have any questions regarding this project, please feel free to contact me at 715/845-4100.

Sincerely,
MAXIM TECHNOLOGIES, INC.®


Marsha A. Meurette
Environmental Scientist

MAM/mam

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pc: Gary Schuster, 219 East Second Street, Merrill, WI 54452



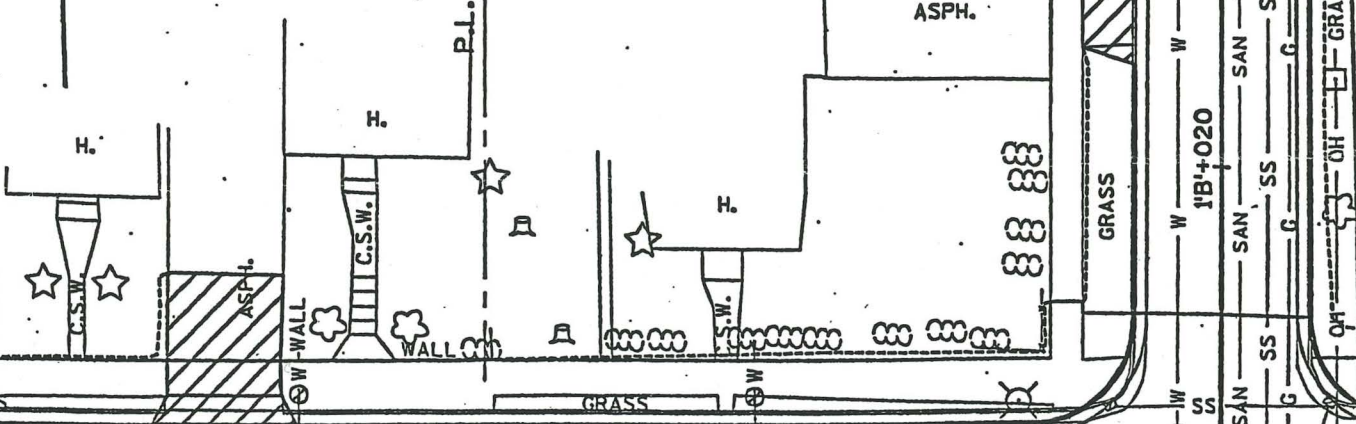
LEGEND

- SOIL BORING LOCATION
- LIGHT POST
- WATER VALVE
- GEOPROBE LOCATION

HAROLD W. & DORIS S. DAHLKE

DONALD & VIOLET TAYLOR

ASPH.



*Groundwater
Slow
South*

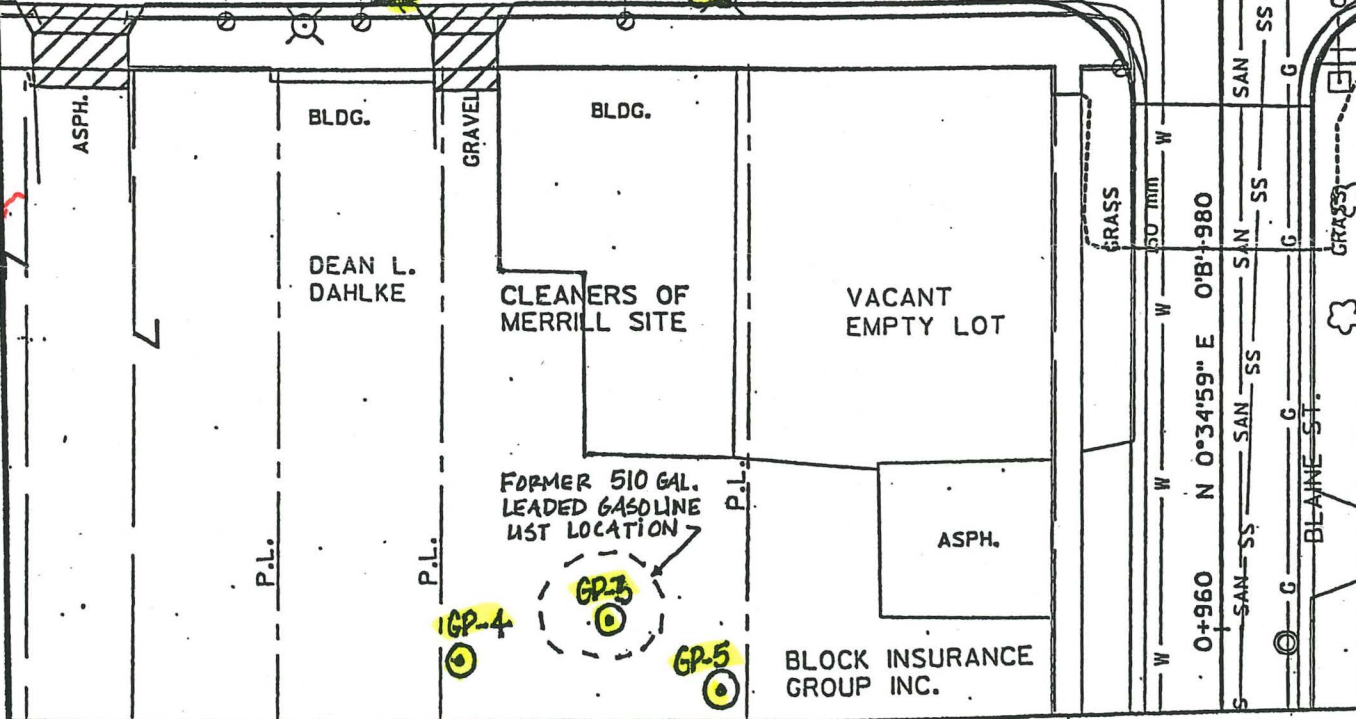


FIGURE
Scale: 1" = 35'

The Cleaners of Merrill
219 East Second Street (HWY 64)
Merrill, Wisconsin
Maxim Proj. #9914200

Maxim Technologies
555 S 72nd Ave
Wausau, WI 54401

TABLE 1
CHEMICAL ANALYSIS OF SOIL AND SOIL LEACHATE
THE CLEANERS OF MERRILL
MERRILL, WISCONSIN
MAXIM #9914200

BORING ID	SB-7	GP-1	SB-8	GP-2	GP-3	GP-4	GP-5	NR 720 SOIL CLEANUP STANDARDS	
DEPTH (feet bls)	10-12	19-21	2-4	12-16	12-16	12-16	12-16		
DATE SAMPLED	11/4/98	12/30/99	11/4/98	12/30/99	12/30/99				
PARAMETER (ppm)									
GRO	<2.6	<5.59	<2.7	<6.13	<5.45	<6.06	<6.00	100*	
Lead	-	1.04	-	0.761	117**	0.909	<0.636	50 - Non-ind. 500 - Ind. (direct contact stnds)	
PETROLEUM VOLATILE ORGANIC COMPOUNDS (PVOC)									
Benzene	-	<0.025	-	<0.025	<0.025	<0.025	<0.025	0.0055	
Toluene	3.100	<0.025	0.071	<0.025	<0.025	<0.025	<0.025	1.5	
Ethylbenzene	-	<0.025	-	<0.025	<0.025	<0.025	<0.025	2.9	
Total Xylenes	-	<0.025	-	<0.025	<0.025	<0.025	<0.025	4.1	
1,3,5 Trimethylbenzene	-	<0.025	-	<0.025	<0.025	<0.025	<0.025	---	
1,2,4 Trimethylbenzene	-	<0.025	-	<0.025	<0.025	<0.025	<0.025	---	
MTBE	-	<0.025	-	<0.025	<0.025	<0.025	<0.025	---	

GP-1 placed approximately 1 foot west of SB-7, and GP-2 placed approximately 1-2 feet east of SB-8

bls = below land surface

mg/kg = milligrams per kilogram (parts-per-million)

* standard corresponds to permeable soils
(hydraulic conductivity > 10 E-6 cm/s)

Non-Ind. = Non-Industrial residual direct contact standard

ppm = parts per million which is equivalent to milligrams per kilogram (mg/kg)

** value exceeds the non-industrial standard but is less than the industrial standard, however the sample was collected from 12-16 feet below land surface and therefore does not pose a direct contact threat.

Shading indicates a generic soil standard exceedance

- = No value reported

--- = No soil standard currently applicable

Boring locations are depicted in Figure 1

Ind. = Industrial residual direct contact standard

BORING ID	GP-3	NR 140 PREVENTIVE ACTION LIMIT	NR 140 ENFORCEMEN STANDARD
DEPTH (feet bls)	12-16		
DATE SAMPLED	12/30/99		
PARAMETER (ppb)			
Synthetic Precipitation Leaching Procedure SPLP - Lead	17	1.5	15

shading indicates a preventive action limit exceedance

ppb = parts per billion which is equivalent to micrograms per liter (ug/L)

TABLE 2
CHEMICAL ANALYSIS OF GROUNDWATER
THE CLEANERS OF MERRILL
MERRILL, WISCONSIN
MAXIM #9914200

BORING ID	GP-1	SB-8	GP-2	GP-3	GP-5	NR 140 PREVENTIVE ACTION LIMIT	NR 140 ENFORCEMENT STANDARD
DATE SAMPLED	12/30/99	11/4/98	12/30/99	12/30/99	12/30/99		
Volatile Organic Compounds (ppb)							
Benzene	<0.15	-		<0.75	0.168	0.5	5
Ethylbenzene	<0.5	-	0.554	<2.50	<0.5	140	700
MTBE	<0.3	-	<0.3	<1.5	<0.3	12	60
Methylene chloride	<0.39	<0.36	<0.39	<1.95	<0.39	0.5	5
Tetrachloroethylene	0.321	7.8	0.733	13.3	3.3	0.5	5
Toluene	<0.4	<0.27	<0.4	<2.00	<0.4	68.6	343
Trichloroethylene	<0.4	-	<0.4	<2.00	<0.4	0.5	5
Trimethylbenzenes (1,2,4 & 1,3,5)	<0.4	-	0.566	<2.00	<0.4	96	480
Vinyl Chloride	<0.11	-	<0.11	<0.55	<0.11	0.02	0.2
Xylenes (m & p & o)	0.704	-	1.25	<2.00	<0.4	124	620

GP-2 placed approximately 1-2 feet east of SB-8

- = value not reported

Shading indicates an enforcement standard exceedance

A water sample could not be collected from GP-4

No other VOC compounds were detected above the laboratory limit of detection

Boring locations are depicted in Figure 1

ppb = parts per billion which is equivalent to micrograms per liter (ug/L)