

The following site is being submitted for inclusion into the Groundwater GIS registry:

- For DNR County and Region list go to:
g:\pfp\pecfa\site\gis\BRRTS County and Region Codes.xls
- To begin, click on cell to the right of; *This is a:*
- Use Tab, ↓ or Pg Down to navigate form. Print & include with file when completed.

This is a:	New Submittal
BRRTS ID (no dashes):	0360000741
Comm # (no dashes):	53081170332
County:	Sheboygan
Region:	Southeast
Site name:	Town of Sheboygan
Street Address:	3932 Superior Ave
City:	Sheboygan
Final Closure Date	2002-08-07
Closure Conditions:	met
Off-source property contamination? (If yes, attach locational data and deed information on pg. 2)	No
Right-of-way contamination?	No
Contaminated media:	Groundwater
GPS Coordinates (meters in the WTM91 projection)	
Easting (X):	700361
Northing (Y):	367781
Collection Method:	DNR Web Site
Scale or Resolution:	1:3,839
(1:24,000 scale or finer)	
Prepared by:	Lee Delcore
Submitted by:	Cheryl Nelson

Source Property Checklist

- Final Closure Letter
- Copy of the most recent deed, which includes legal description for all properties w/ GW > NR 140 ES
- Where the legal description in the deed(s) refers to a certified survey map or recorded plat map, include those documents
- Parcel ID for all properties w/ GW > NR 140 ES
- General Location Map
- Detailed Location Map showing property boundaries, buildings, MW(s) and/or potable wells etc for properties with GW > NR 140 ES
- Latest Map(s) showing extent or outline of current GW plume (isoconcentrations)
- Map showing GW flow direction
- Latest Table of GW results
- Geologic cross section (if generated as part of the site investigation)
- Statement signed by RP certifying correctness of legal descriptions
- Updated Database



August 7, 2002

Ms. Carol Holfeltz
Town of Sheboygan
3932 Superior Ave.
Sheboygan, WI 53081

RE: **Final Closure**

Commerce # 53081-1703-32 **WDNR BRRTS # 03-60-000741**
Town of Sheboygan, 3932 Superior Ave., Sheboygan

Dear Ms. Holfeltz:

The Wisconsin Department of Commerce (Commerce) has received all items required for closure of the site referenced above. This site is now listed as "closed" on the Commerce database.

It is in your best interest to keep all documentation related to the environmental activities at your site. If residual contamination is encountered in the future, appropriate measures must be implemented to assure that it is managed following all applicable regulations. If future site conditions indicate that any remaining contamination poses a threat, and subsequent information indicates a need to reopen this case, any original claim under the PECFA fund would also reopen and you may apply for assistance to the extent of remaining eligibility.

Thank you for your efforts to protect Wisconsin's environment. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5403.

Sincerely,

A handwritten signature in cursive script that reads 'Lee R. Delcore'.

Lee R. Delcore
Hydrogeologist
Site Review Section

cc: Alpha Terra Science
Michael Bauer – Hopp, Powell, Bauer, Donohue & Buesing
Case File

1600927

SHEBOYGAN COUNTY, WI
RECORDED ON

06-11-2001 4:46 PM

DARLENE J. NAVIS
REGISTER OF DEEDS

RECORDING FEE: 12.00
TRANSFER FEE:

059378 6

**NOTICE OF CONTAMINATION
TO PROPERTY**

Part of the Southwest Quarter (SW-1/4) of the Southwest Quarter (SW-1/4) of Section Sixteen (16), Township Fifteen (15) North, Range Twenty-three (23) East, Town of Sheboygan, Sheboygan County, Wisconsin, described as: Commencing at the Southwest Section corner; thence North Two hundred ninety-nine and three tenths (299.3) feet; thence East Two hundred forty-eight and thirty-five hundredths (248.35) feet; thence South Two hundred ninety-three and six tenths (293.6) feet to the South Section line; thence West to the point of beginning.

STATE OF WISCONSIN)
) ss.
COUNTY OF SHEBOYGAN)

**HOPP, POWELL, BAUER,
DONOHUE & BUESING
ATTORNEYS AT LAW
601 NORTH FIFTH STREET
SHEBOYGAN, WI 53081**

Section 1. The Town of Sheboygan, a body corporate and politic, is the owner of the above-described property.

Parcel Identification No. 347960

Section 2. One or more petroleum discharges have occurred at this property. Petroleum contaminated groundwater above NR 140 enforcement standards and petroleum contaminated soils above NR 720 residual contaminant levels of the Wisconsin Administrative Code exist on this property in the area of the former underground storage tank.

Section 3. The owner declares that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied, and improved subject to the following limitations and/or restrictions:

Anyone who proposed to construct or reconstruct a well on this property is required to contact the Department of Natural Resources' Bureau of Drinking Water and Groundwater, or its successor agency, to determine what specific prohibitions or requirements are applicable, prior to constructing or reconstructing a well on this property. No well may be constructed or reconstructed on this property unless applicable requirements are met.

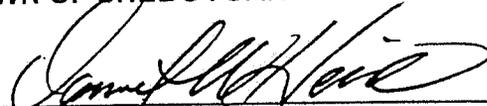
Residual petroleum contaminated soil with benzene, ethylbenzene, toluene, and total xylene levels as high as 2.74 mg/kg, 19.0 mg/kg, 27.3 mg/kg, and 106.8 mg/kg, respectively, remains on this site, at depth, limited to the north-central corner of the property in the area of the former underground storage tank. It has been shown that these levels are protective of health and the environment. If this contaminated soil is excavated in the future, it may be considered a solid waste and will need to be disposed in accordance with all applicable laws.

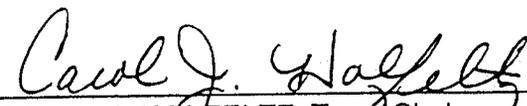
Any person who is or becomes owner of the property described above may request that the Wisconsin Department of Commerce, or its successor, issue a determination that the restrictions set forth in this covenant are no longer required. That property owner shall provide any and all necessary information to the Department in order for the Department to be able to make a determination. Upon receipt of such a request, the Department shall determine whether or not the restrictions contained herein can be extinguished. Conditions under which a restriction may be extinguished will be determined in accordance with the site specific standards, rules, and laws for this property. If the Department determines that the restrictions can be extinguished, an affidavit, with a copy of the Department's written determination, may be recorded to give notice that this restriction, or portions of this

restriction, are no longer binding. Any restriction placed upon this property shall not be extinguished without the Department's written determination.

IN WITNESS WHEREOF, the owner of the property has executed this document this 5th day of June, 2001.

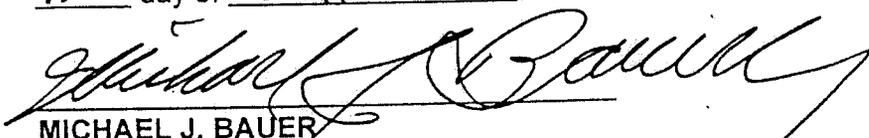
TOWN OF SHEBOYGAN

By 
DANIEL W. HEIN, Town Chairman

By 
CAROL J. HOLFELTZ, Town Clerk

AUTHENTICATION

Signatures of Daniel W. Hein and Carol J. Holfeltz authenticated this 11th day of June, 2001.



MICHAEL J. BAUER
Title: Member State Bar of Wisconsin
State Bar No. 1012261

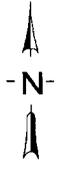
This instrument was drafted by:

Attorney Kathie Z. Norman
HOPP, POWELL, BAUER,
DONOHUE & BUESING
601 North Fifth Street
Sheboygan, WI 53081

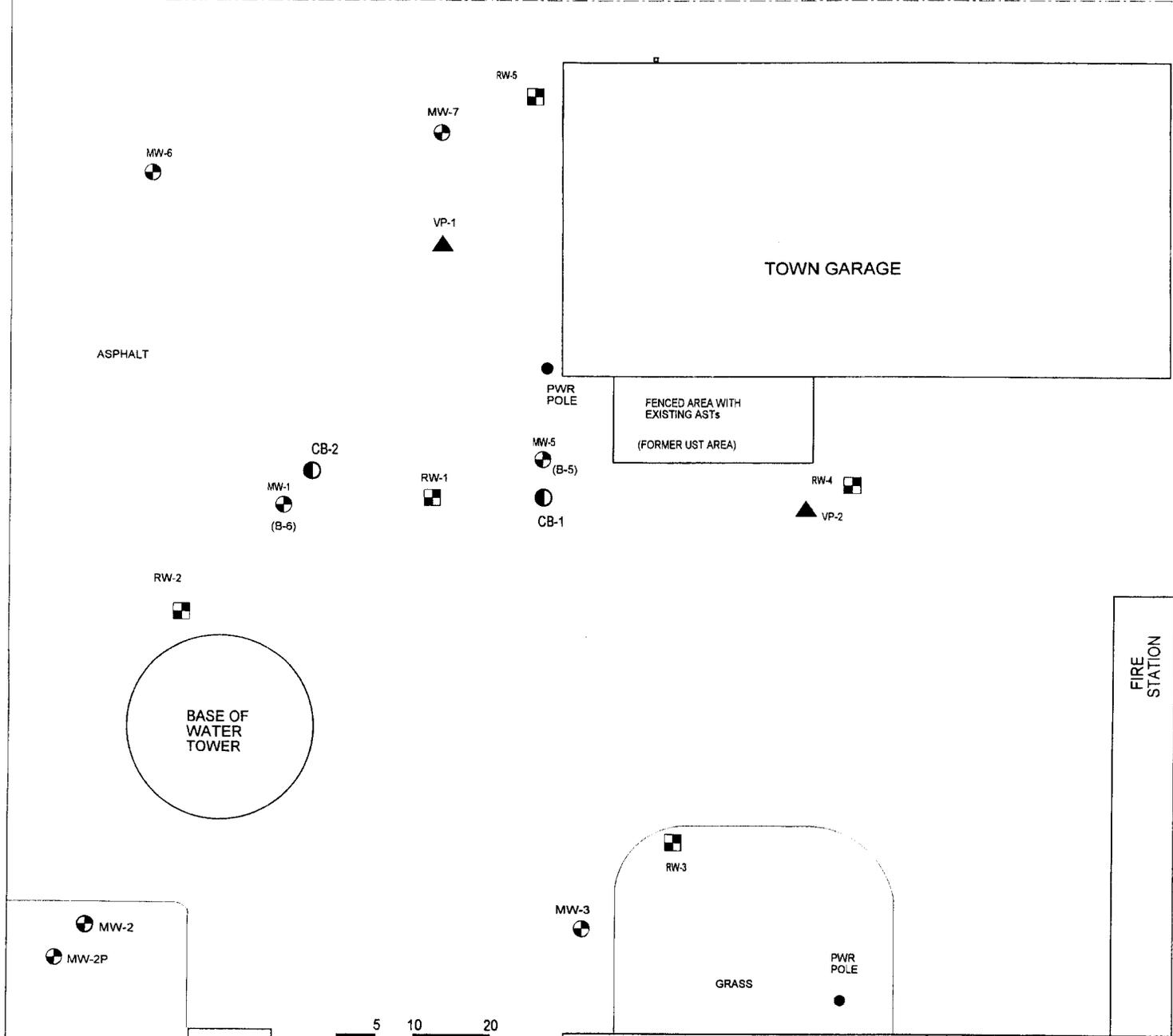
YSTESUND PROPERTY

LEGEND

-  EXISTING MONITORING WELL
-  EXISTING RECOVERY WELL
-  EXISTING VAPOR PROBE
-  CLOSURE SOIL BORING



APPROX. LOCATION OF PROPERTY LINE



5 10 20
SCALE: 1 INCH = 20 FEET

Town of Sheboygan - REMEDIATION SYSTEM			
SITE MAP - (INCLUDING CLOSURE BORINGS)			
REV	DATE	DESCRIPTION	APPV'D



ALPHA TERRA
SCIENCE

DATE: AUG 00	P/E: <i>Schubert et al</i>
APPROVED: GCP	FIGURE 1-A

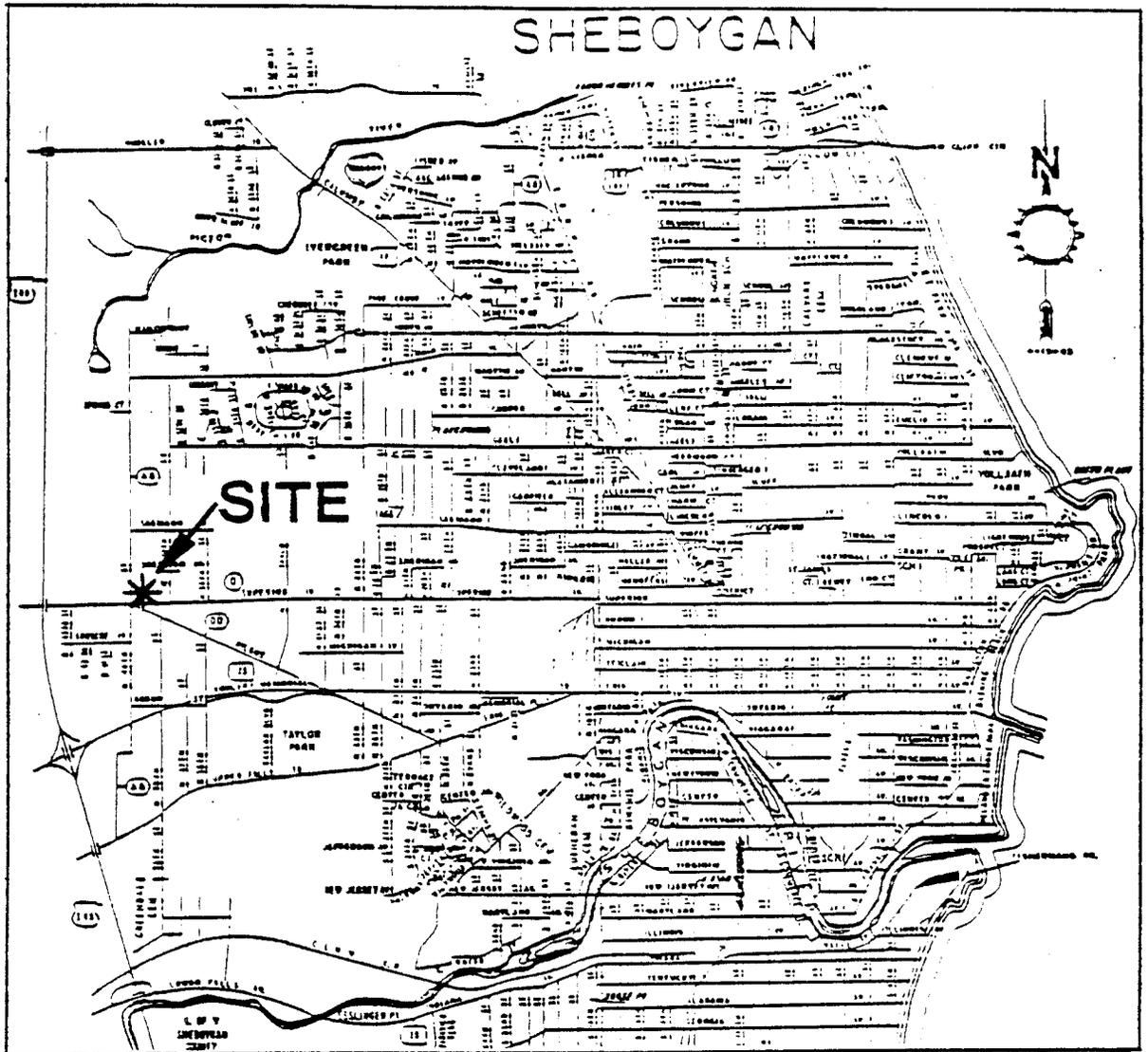
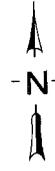


Figure 1. Project Location Map

ESTIMATED EXTENT OF GROUNDWATER CONTAMINATION WITH ONE OR MORE PVOC ABOVE NR 140 ENFORCEMENT STANDARD



LEGEND

-  EXISTING MONITORING WELL
-  EXISTING RECOVERY WELL
-  EXISTING VAPOR PROBE
-  CLOSURE SOIL BORING

YSTESUND PROPERTY

APPROX. LOCATION OF PROPERTY LINE

ESTIMATED EXTENT OF RESIDUAL SOIL CONTAMINATION ABOVE NR 720 RESIDUAL CONTAMINANT LEVELS (4,700 SF)

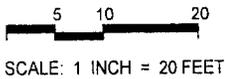
TOWN GARAGE

ASPHALT

FENCED AREA WITH EXISTING ASTs (FORMER UST AREA)

FIRE STATION

BASE OF WATER TOWER

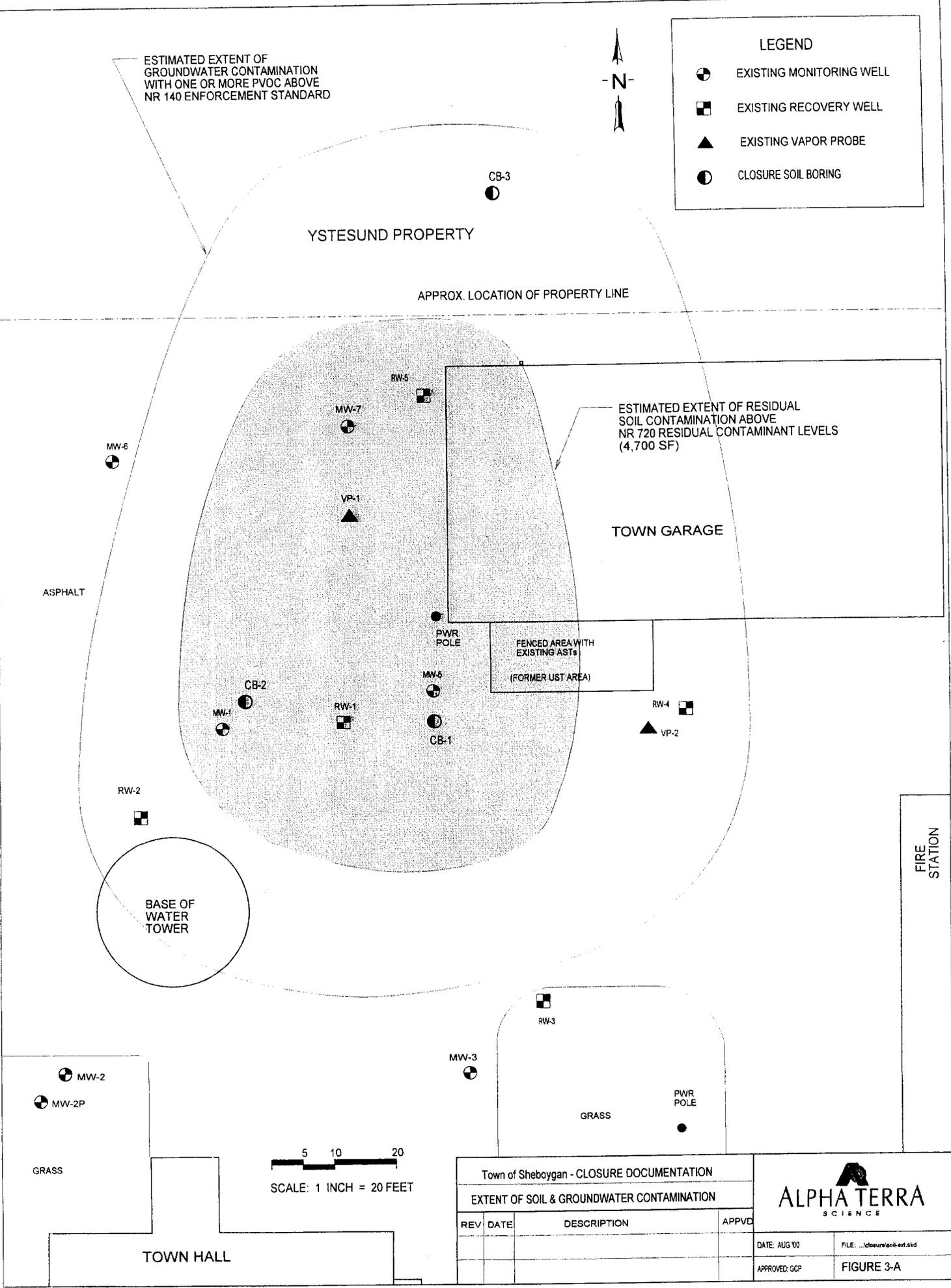


Town of Sheboygan - CLOSURE DOCUMENTATION			
EXTENT OF SOIL & GROUNDWATER CONTAMINATION			
REV	DATE	DESCRIPTION	APPVD

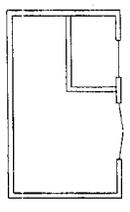


DATE: AUG '00
 FILE: ...closure/soil-ext.sxd
 APPROVED: GCP
 FIGURE 3-A

TOWN HALL



Town of Sheboygan - REMEDIATION SYSTEM		
GROUNDWATER SAMPLE MAP (7-8-98)		
REV	DATE	DESCRIPTION



MW-4

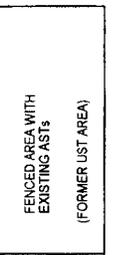
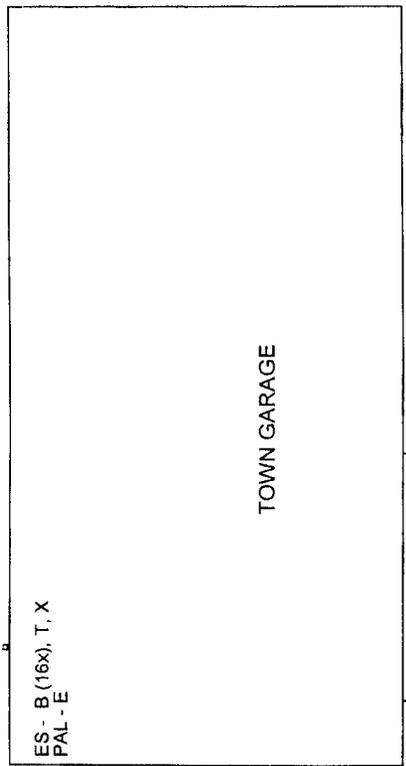
LEGEND

- EXISTING MONITORING WELL
- EXISTING RECOVERY WELL

ES = Enforcement Standard
 PAL = Preventive Action Limit
 B = Benzene
 E = Ethylbenzene
 T = Toluene
 X = Xylene

5 10 20
 SCALE: 1 INCH = 20 FEET

THIS MAP INDICATES WELLS WITH BETX CONTAMINATION IN THE LAST SAMPLING ROUND (7-8-98). IN ALL CASES, BENZENE WAS THE COMPOUND THAT EXCEEDED ITS ES (5 UG/L) BY THE GREATEST MULTIPLE. THE MULTIPLE IS INDICATED. REFER TO "GROUNDWATER CHEMISTRY SUMMARY DATA TABLE" FOR FURTHER DETAILS.



ES - B (16x), T, X
PAL - E

RW-5

MW-7

ES - B (108x), X
(E & T < PAL)

RW-4

ES - B (27x), T
PAL - X
(E < PAL)

MW-5

ES - B (30x), T, X
PAL - E

RW-1
(abandoned 9/98)

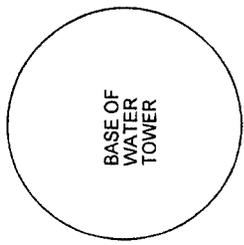
ES - B (788x), T, X
(E < PAL)

MW-1

ES - B (5x), X
(E & T < PAL)

RW-2

ES - B (7x), T, X
PAL - E



PWR POLE

RW-3

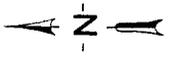
MW-3

PWR POLE

MW-2

MW-2P

TOWN HALL



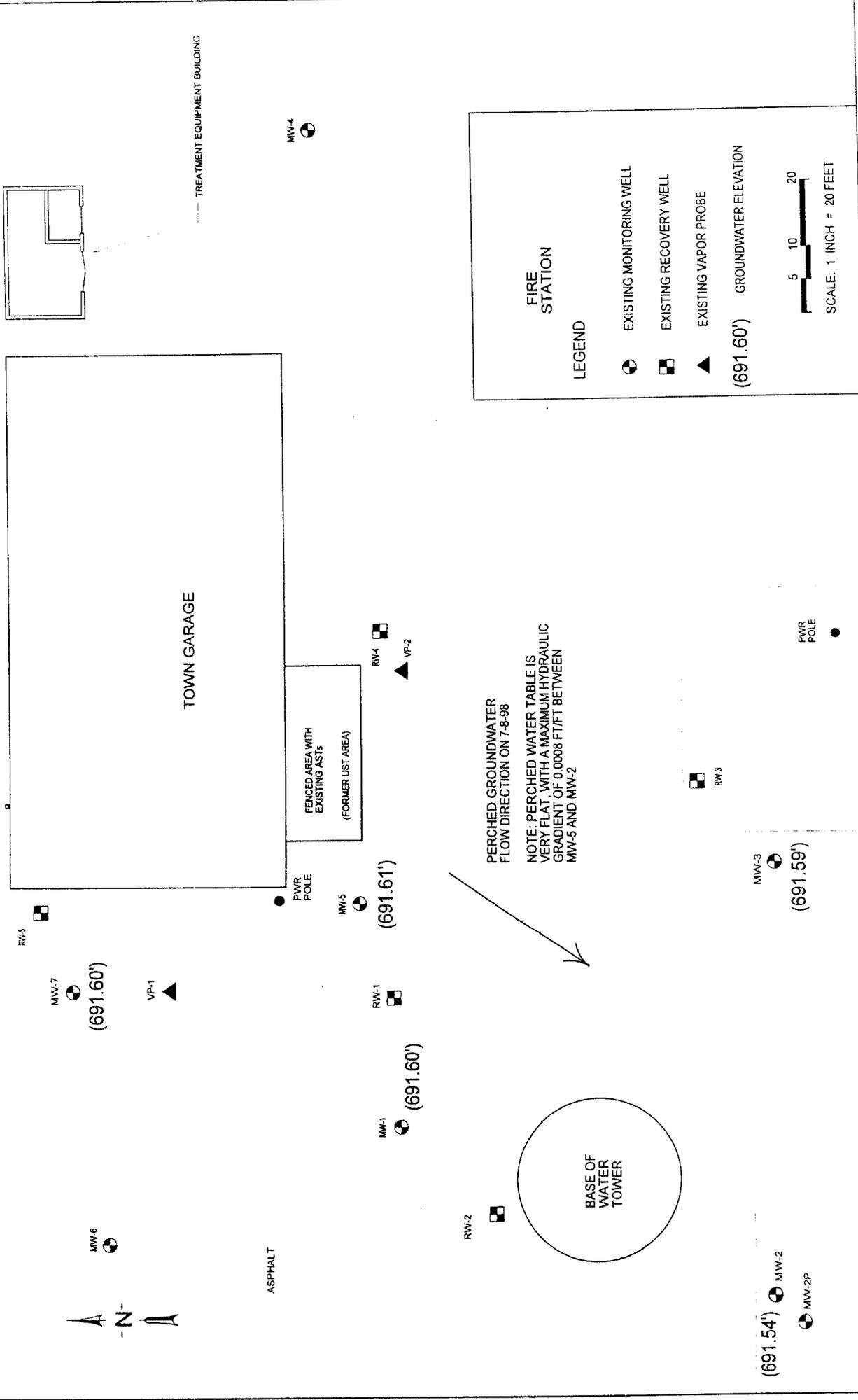
ASPHALT

GRASS

GRASS

REV	DATE	DESCRIPTION	APP'VD
		PERCHED WATER ELEVATIONS (7-8-98)	

REV	DATE	DESCRIPTION	APP'VD
		GRASS	
		GRASS	



Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan. TSB9301

Well I.D.: MW-1

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation ²				
PAL: Preventative Action Limit				N: Not detected				Ground Elevation				
ES: Enforcement Standard				L: Detected but less than PQL				Screen Top Elevation				
MDL: Method Detection Limit				--: Not analyzed				Point elevation				
TPH: Total Petroleum Hydrocarbons												
GRO: Gasoline Range Organics				Sample Date	9/10/90	10/20/90	6/9/93	6/9/93	4/18/94	9/15/94	5/16/96	
DRO: Diesel Range Organics				Depth to Water	19.76	19.54	15.06	-	18.91	19.20	22.78	
VOC: Volatile Organic Compounds				Water Elevation	689.80	690.06	694.50	-	690.65	690.38	686.80	
ORGANICS												
				MDL Note	S	S	T	T	E	E	3, 4	
GRO				50	--	--	37,000	110,000	94,000	150,000		
DRO				100	--	--	21,000 ¹	14,000 ¹	17,000	--		
TPH					270,000	466,000	--	--	--	--		
ORGANICS (VOC)												
				PAL	ES	MDL Notes						
Benzene				0.50	5	0.6	21,000	11,813	27,000	26,000	21,000	18,000
Ethylbenzene				140	700	1	5,300	2,872	4,200	3,900	4,000	4,000
Toluene				68.6	343	1	40,000	22,302	34,000	32,000	28,000	23,000
Total Xylene				124	620	1	15,000	7,353	20,000	1,8000	--	--
o-Xylene				124	620	1	--	--	--	--	6,000	6,200
m- & p- Xylenes				124	620	1	--	--	--	--	14,000	14,000
Methyl-t-butyl ether				12	60	1	--	--	11,000	12,000	9,000	3,200
1,2,4-Trimethyl benzene				96	480	1	--	--	3,900	3,500	4,700	5,700
1,3,5-Trimethyl benzene				96	480	1	--	--	<2,500	<2,500	1,100	1,600
ORGANICS (PAH)												
				PAL	ES	MDL Notes						
Total PAH												
INORGANICS (metals)												
				PAL	ES	MDL Notes		F				
Lead				1.5	15		49	--	--	--	--	59
Iron							--	--	5,200	--	--	6,100
OTHER												
				PAL	ES	MDL Notes						
pH							--	--	--	--	--	7.6
Total Hardness (mg/l)							--	--	--	--	--	--
TSS (mg/l)							--	--	470	--	--	--
Calcium (mg/l)							--	--	2,400	--	--	--
Oil and Grease							--	--	--	--	--	--

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

T = Sample analyzed by Twin City Testing, WI certification # 999446910

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ Lower boiling hydrocarbons present

² Well resurveyed 9/94. & 4/97 Old elev. 709.56 & 709.58

³ MW-1 not sampled 5-17-95 due to free product.

⁴ MW-1 not sampled 5-16-96. Well dry. A small volume of dark grey silty water was recovered; no free product present.

See lab reports for additional information.

APPROVED: *GOP*

DATE: 8/24/98

...pen\TSB9301\data\tsb-chem8.xlw

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-2

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation ^{1,2}					
PAL: Preventative Action Limit				N: Not detected				Ground Elevation					
ES: Enforcement Standard				L: Detected but less than PQL				Screen Top Elevation					
MDL: Method Detection Limit				--: Not analyzed				Point elevation					
TPH: Total Petroleum Hydrocarbons													
GRO: Gasoline Range Organics				Sample Date	10/20/90	6/9/93	4/18/94	9/15/94	5/17/95	5/16/96	4/15/97		
DRO: Diesel Range Organics				Depth to Water	18.32	13.48	17.44	20.35	20.90	22.78	21.39		
VOC: Volatile Organic Compounds				Water Elevation	689.86	694.70	690.74	690.33	689.78	687.90	689.27		
ORGANICS													
				MDL Note	S	T	E	E	E	C	U		
GRO				50	--	<30	N	N	N	<100	N		
DRO				100	--	<210	N	--	--	--	--		
TPH					N	--	--	--	--	--	--		
ORGANICS (VOC)													
				PAL	ES	MDL Notes							
Benzene				0.50	5	0.6	<1	<5	N	N	N	<0.8	N
Ethylbenzene				140	700	1	N	<5	N	N	N	<1.8	N
Toluene				68.6	343	1	N	<5	N	N	N	<1.4	N
Total Xylene				124	620	1	N	<5	--	--	--	--	--
o-Xylene				124	620	1	--	--	N	N	N	<1.9	N
m- & p- Xylenes				124	620	1	--	--	N	N	N	<3.7	N
Methyl-t-butyl ether				12	60	1	--	<5	N	N	N	<1.6	N
1,2,4-Trimethyl benzene				96	480	1	--	<5	N	N	N	<1.9	N
1,3,5-Trimethyl benzene				96	480	1	--	<5	N	N	N	<1.8	N
ORGANICS (PAH)													
				PAL	ES	MDL Notes							
Total PAH													
INORGANICS (metals)													
				PAL	ES	MDL Notes							
Lead				1.5	15		--	--	--	--	--	--	--
Iron							--	48,000	--	--	--	--	--
OTHER													
				PAL	ES	MDL Notes							
pH							--	--	--	7.5	--	--	--
Total Hardness							--	--	--	--	--	--	--
TSS (mg/l)							--	3,200	--	--	--	--	--
Calcium (mg/l)							--	420	--	--	--	--	--
Oil and Grease							--	--	--	--	--	--	--

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

T = Sample analyzed by Twin City Testing, WI certification # 999446910

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ Changed to a protop Sept. '94. Old elev. = 708.18

² Well resurveyed 4/97 Old elev. 710.68

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

_pen\TSB9301\data\tsb-chem8.xlw

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-2 (cont.)

ABBREVIATIONS		PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation		710.66	
PAL: Preventative Action Limit		N: Not detected				Ground Elevation		708.20	
ES: Enforcement Standard		L: Detected but less than PQL				Screen Top Elevation		693.20	
MDL: Method Detection Limit		--: Not analyzed				Point elevation		683.20	
TPH: Total Petroleum Hydrocarbons		Sample Date		7/8/98					
GRO: Gasoline Range Organics		Depth to Water		19.12					
DRO: Diesel Range Organics		Water Elevation		691.54					
VOC: Volatile Organic Compounds									
ORGANICS		MDL		Note		U			
GRO		50		<50					
DRO		100		--					
ORGANICS (VOC)		PAL		ES		MDL		Notes	
Benzene		0.50		5		0.5		N	
Ethylbenzene		140		700		1		N	
Toluene		68.6		343		1		N	
Total Xylene		124		620		1		N	
o-Xylene		124		620		1		N	
m- & p- Xylenes		124		620		1		N	
Methyl-t-butyl ether		12		60		1		N	
1,2,4-Trimethyl benzene		96		480		1		N	
1,3,5-Trimethyl benzene		96		480		1		N	
Lab RNA Parameters						MDL		Notes	
Sol. Sulfate						mg/l		43.8	
Nitrate		2		10		mg/l		30.5	
Alkalinity as CaCO ₃						mg/l		443	
Sol. Iron (fld fil)						mg/l		0.108	
Sol. Manganese (fld fil)						mg/l		0.016	
Methane						µg/l		<1	
Field RNA Parameters									
pH								--	
Dissolved Oxygen						mg/l		8.1	
Temperature						°C		10.6	
ORGANICS (PAH)		PAL		ES		MDL		Notes	
Total PAH								--	
INORGANICS (metals)		PAL		ES		MDL		Notes	
Lead		1.5		15				--	

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: U = Sample analyzed by U.S. Filter, WI certification # 737053130

E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

T = Sample analyzed by Twin City Testing, WI certification # 999446910

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

NOTES:

B = Analyte found in associated method blank.

F = Sample was field filtered.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

_pen\TSB9301\data\tsb-chem8.xlw

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-2P

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons					PVC Elevation	
PAL: Preventative Action Limit				N: Not detected					710.42	
ES: Enforcement Standard				L: Detected but less than PQL					Ground Elevation	
MDL: Method Detection Limit				--: Not analyzed					708.20	
TPH: Total Petroleum Hydrocarbons									Screen Top Elevation	
GRO: Gasoline Range Organics									668.20	
DRO: Diesel Range Organics									Point elevation	
VOC: Volatile Organic Compounds									663.20	
Sample Date		9/15/94	5/17/95	5/16/96	4/15/97	7/8/98				
Depth to Water		29.40	30.57	31.26	30.69	28.40				
Water Elevation		681.02	679.85	679.16	679.73	682.02				
ORGANICS				MDL Note	E	E	C	U	U	
GRO			50		N	N	<100	N	N	
DRO					--	--	--	--	--	
ORGANICS (VOC)				PAL	ES	MDL	Note	V		
Benzene		0.50	5	0.6		N	N	<0.8	N	N
Ethylbenzene		140	700	1		N	N	<1.8	N	N
Toluene		68.6	343	1		N	N	<1.4	N	N
Total Xylene		124	620	1		--	--	--	--	--
o-Xylene		124	620	1		N	N	<1.9	N	N
m- & p- Xylenes		124	620	1		N	N	<3.7	N	N
Methyl-t-butyl ether		12	60	1		N	N	<1.6	N	N
1,2,4-Trimethyl benzene		96	480	1		N	N	<1.9	N	N
1,3,5-Trimethyl benzene		96	480	1		N	N	<1.8	N	N
Naphthlene		8	40	2		N	--	--	--	--
1,2-Dichloroethane		0.5	5	1		N	--	--	--	--
Lab RNA Parameters				MDL Notes						
Sol. Sulfate				mg/l	--	--	--	--	47.3	
Nitrate		2	10	mg/l	--	--	--	--	27.14	
Alkalinity as CaCO ₃				mg/l	--	--	--	--	483	
Sol. Iron (fld fil)				mg/l	--	--	--	--	<0.01	
Sol. Manganese (fld fil)				mg/l	--	--	--	--	<0.002	
Methane				µg/l	--	--	--	--	<1	
Field RNA Parameters										
pH					7.6	--	--	--	--	
Dissolved Oxygen				mg/l	--	--	--	--	3.6	
Temperature				°C	--	--	--	--	11.1	
ORGANICS (PAH)				PAL	ES	MDL	Notes			
Total PAH					--	--	--	--	--	
INORGANICS (metals)				PAL	ES	MDL	Notes			
Lead		1.5	15		N	--	--	--	--	

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES:

F = Sample was field filtered.

See lab reports for additional information.

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DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-3

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation ¹				
PAL: Preventative Action Limit				N: Not detected				Ground Elevation				
ES: Enforcement Standard				L: Detected but less than PQL				Screen Top Elevation				
MDL: Method Detection Limit				--: Not analyzed				Point elevation				
TPH: Total Petroleum Hydrocarbons												
GRO: Gasoline Range Organics				Sample Date	9/10/90	10/20/90	6/9/93	4/18/94	9/15/94	9/15/95	5/17/95	
DRO: Diesel Range Organics				Depth to Water	19.40	21.96	13.98	17.87	18.05	--	18.65	
VOC: Volatile Organic Compounds				Water Elevation	689.34	686.78	694.76	690.87	690.65	--	690.05	
ORGANICS												
				MDL	Note	S	S	T	E	E	E, D	
GRO				50		--	--	2,800	80	N	N	
DRO				100		--	--	<210	N	--	--	
TPH						7,200	35,600	--	--	--	--	
ORGANICS (VOC)												
				PAL	ES	MDL Notes						
Benzene				0.50	5	0.6	1,200	705	210	9.7	4	2.6
Ethylbenzene				140	700	1	140	1	97	1.3	N	N
Toluene				68.6	343	1	780	324	240	15	N	N
Total Xylene				124	620	1	170	271	160	--	--	--
o-Xylene				124	620	1	--	--	--	1.9	N	N
m- & p- Xylenes				124	620	1	--	--	--	5.2	N	N
Methyl-t-butyl ether				12	60	1	--	--	89	N	N	
1,2,4-Trimethyl benzene				96	480	1	--	--	58	N	N	
1,3,5-Trimethyl benzene				96	480	1	--	--	<50	N	N	
ORGANICS (PAH)												
				PAL	ES	MDL Notes						
Total PAH												
INORGANICS (metals)												
				PAL	ES	MDL Notes						
Lead				1.5	15		14	--	--	--	--	--
Cadmium				0.5	5		--	--	--	--	--	
Iron							--	--	27,000	--	--	
OTHER												
				PAL	ES	MDL Notes						
pH							--	--	--	7.4	--	
Total Hardness							--	--	--	--	--	
TSS (mg/l)							--	--	311	--	--	
Calcium (mg/l)							--	--	150	--	--	
Oil and Grease							--	--	--	--	--	

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES: ¹ Resurveyed Sept. '94. Old elev. = 708.74

F = Sample was field filtered.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-3 (cont.)

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation ^{1,3}								
PAL: Preventative Action Limit				N: Not detected				Ground Elevation				708.69				
ES: Enforcement Standard				L: Detected but less than PQL				Screen Top Elevation				708.90				
MDL: Method Detection Limit				--: Not analyzed				Point elevation				692.40				
TPH: Total Petroleum Hydrocarbons												682.40				
GRO: Gasoline Range Organics				Sample Date				5/16/96				4/15/97	7/8/98			
DRO: Diesel Range Organics				Depth to Water				26.77				26.52	17.10			
VOC: Volatile Organic Compounds				Water Elevation				681.93				682.17	691.59			
ORGANICS				MDL Note				2				2	U			
GRO				50									N			
DRO				100									--			
TPH																
ORGANICS (VOC)				PAL				ES				MDL Notes				
Benzene				0.50				5				0.5				N
Ethylbenzene				140				700				1				N
Toluene				68.6				343				1				N
Total Xylene				124				620				1				N
o-Xylene				124				620				1				N
m- & p- Xylenes				124				620				1				N
Methyl-t-butyl ether				12				60				1				N
1,2,4-Trimethyl benzene				96				480				1				N
1,3,5-Trimethyl benzene				96				480				1				N
Lab RNA Parameters				MDL Notes												
Sol. Sulfate								mg/l				13.62				
Nitrate				2				10				mg/l				21.03
Alkalinity as CaCO ₃								mg/l				347				
Sol. Iron (fld fil)								mg/l				<0.01				
Sol. Manganese (fld fil)								mg/l				<0.002				
Methane								µg/l				<1.0				
Field RNA Parameters																
pH												--				
Dissolved Oxygen								mg/l				5.3				
Temperature								°C				10.5				
ORGANICS (PAH)				PAL				ES				MDL Notes				
Total PAH												--				
INORGANICS (metals)				PAL				ES				MDL Notes				
Lead				1.5				15				--				

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ Resurveyed Sept. '94. Old elev. = 708.74

² MW-3 not sampled. Well dry. A small volume of water was removed but well did not recharge.

³ Well resurveyed 4/97 Old elev. 708.7

See lab reports for additional information.

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DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-4

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation ^{2,3}			
PAL: Preventative Action Limit				N: Not detected				Ground Elevation			
ES: Enforcement Standard				L: Detected but less than PQL				Screen Top Elevation			
MDL: Method Detection Limit				--: Not analyzed				Point elevation			
TPH: Total Petroleum Hydrocarbons											
GRO: Gasoline Range Organics				Sample Date	9/10/90	10/20/90	Note ¹	9/15/94	5/17/95	5/16/96	4/15/97
DRO: Diesel Range Organics				Depth to Water	32.96	32.86		31.55	32.85	33.27 ³	32.72
VOC: Volatile Organic Compounds				Water Elevation	679.74	679.84		681.83	680.53	680.11 ³	680.40
ORGANICS				MDL	Note	S	S	E	E	3	U,4
GRO				50		--	--	170	N		N
DRO				100		--	--	--	--		--
TPH						N	<200	--	--		--
ORGANICS (VOC)				PAL	ES	MDL Notes					
Benzene				0.50	5	0.6	N	N	140	N	N
Ethylbenzene				140	700	1	N	N	N	N	N
Toluene				68.6	343	1	N	N	N	N	N
Total Xylene				124	620	1	N	N	--	--	--
o-Xylene				124	620	1	--	--	N	N	N
m- & p- Xylenes				124	620	1	--	--	2.5	N	1.08
Methyl-t-butyl ether				12	60	1	--	--	6.4	N	N
1,2,4-Trimethyl benzene				96	480	1	--	--	N	N	N
1,3,5-Trimethyl benzene				96	480	1	--	--	N	N	N
ORGANICS (PAH)				PAL	ES	MDL Notes					
Total PAH											
INORGANICS (metals)				PAL	ES	MDL Notes					
Lead				1.5	15		3	--	--	--	--
Cadmium				0.5	5		--	--	--	--	--
Iron							--	--	--	--	--
OTHER				PAL	ES	MDL Notes					
pH							--	--	7.4	--	--
Total Hardness							--	--	--	--	--
TSS (mg/l)							--	--	--	--	--
Calcium (mg/l)							--	--	--	--	--
Oil and Grease							--	--	--	--	--

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ Flushmount buried during 6/93 & 4/94 sampling.

² Flushmount & casing extended up in Aug. '94.
Old elev. = 712.70

³ Flushmount cover damaged and upper section casing cracked and bent by dumpster. Couldn't sample.
Resurvey 4/97 Old elev = 713.38

⁴ Sampled using Whale submersible pump.

See lab reports for additional information.

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DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-4 (cont.)

ABBREVIATIONS		PAH: Polynuclear Aromatic Hydrocarbons		PVC Elevation	
PAL: Preventative Action Limit		N: Not detected		Ground Elevation	713.50
ES: Enforcement Standard		L: Detected but less than PQL		Screen Top Elevation	691.30
MDL: Method Detection Limit		--: Not analyzed		Point elevation	676.30
TPH: Total Petroleum Hydrocarbons					
GRO: Gasoline Range Organics					
DRO: Diesel Range Organics					
VOC: Volatile Organic Compounds					
	Sample Date	7/8/98			
	Depth to Water	30.25			
	Water Elevation	682.87			
ORGANICS					
	MDL	Note	U		
GRO	50		N		
DRO	100		--		
TPH					
ORGANICS (VOC)					
	PAL	ES	MDL	Notes	
Benzene	0.50	5	0.5	N	
Ethylbenzene	140	700	1	N	
Toluene	68.6	343	1	N	
Total Xylene	124	620	1	--	
o-Xylene	124	620	1	N	
m- & p- Xylenes	124	620	1	N	
Methyl-t-butyl ether	12	60	1	N	
1,2,4-Trimethyl benzene	96	480	1	N	
1,3,5-Trimethyl benzene	96	480	1	N	
Lab RNA Parameters					
				MDL	Notes
Sol. Sulfate				mg/l	28.2
Nitrate	2	10		mg/l	47.37
Alkalinity as CaCO ₃				mg/l	473
Sol. Iron (fld fil)				mg/l	0.404
Sol. Manganese (fld fil)				mg/l	0.164
Methane				µg/l	1.94
Field RNA Parameters					
pH					--
Dissolved Oxygen				mg/l	3.8
Temperature				°C	9.6
ORGANICS (PAH)					
	PAL	ES	MDL	Notes	
Total PAH				--	
INORGANICS (metals)					
	PAL	ES	MDL	Notes	
Lead	1.5	15		--	

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ Resurveyed Sept. '94. Old elev. = 708.74

² MW-3 not sampled. Well dry. A small volume of water was removed but well did not recharge.

³ Well resurveyed 4/'97 Old elev. 708.7

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-5

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation						
PAL: Preventative Action Limit				N: Not detected				Ground Elevation						
ES: Enforcement Standard				L: Detected but less than PQL				Screen Top Elevation						
MDL: Method Detection Limit				--: Not analyzed				Point elevation						
TPH: Total Petroleum Hydrocarbons														
GRO: Gasoline Range Organics				Sample Date	9/10/90	10/20/90	6/9/93	4/18/94	8/18/94	8/18/94	9/15/94			
DRO: Diesel Range Organics				Depth to Water	20.50	20.86	15.02	19.68	--	--	20.10			
VOC: Volatile Organic Compounds				Water Elevation	689.62	689.26	695.10	690.44	Note ³	Note ³	690.02			
ORGANICS														
				MDL	Note	S	S	T	E	E	E, D	E		
GRO				50		--	--	240,000	170,000	140,000	120,000	110,000		
DRO				100		--	--	39,000 ¹	53,000 ²	--	--	--		
TPH						270,000	556,000	--	--	--	--	--		
ORGANICS (VOC)														
				PAL	ES	MDL	Notes	V						
Benzene				0.50	5	0.6		30,000	18,444	35,000	33,000	30,000	32,000	30,000
Ethylbenzene				140	700	1		4,000	2468	5,400	2,900	2,900	3,000	2,700
Toluene				68.6	343	1		35,000	22,534	46,000	39,000	38,000	41,000	37,000
Total Xylene				124	620	1		10,000	7,570	26,000	--	--	--	--
o-Xylene				124	620	1		--	--	--	4,500	4,700	4,900	3,900
m- & p- Xylenes				124	620	1		--	--	--	9,600	10,000	11,000	8,300
Methyl-t-butyl ether				12	60	1		--	--	16,000	10,000	6,900	8,900	9,900
1,2,4-Trimethyl benzene				96	480	1		--	--	9,100	2,600	2,000	2,100	1,600
1,3,5-Trimethyl benzene				96	480	1		--	--	2,700	540	490	500	<500
1,2-dichloroethane				0.5	5	1		--	--	--	<500	--	--	--
Naphthalene				8	40	1		--	--	--	<1,000	--	--	--
ORGANICS (PAH)														
				PAL	ES	MDL	Notes	MW-5's PAH RESULTS LISTED ON OTHER SHEET						
Total PAH														
INORGANICS (metals)														
				PAL	ES	MDL	Notes	F						
Lead				1.5	15			80	--	--	97	--	--	68
Cadmium				0.5	5	0.5		--	--	--	N	--	--	--
Iron								--	--	--	--	--	--	6,500
OTHER														
				PAL	ES	MDL	Notes							
pH								--	--	--	6.8	--	--	--
Total Hardness								--	--	--	820	--	--	--
TSS (mg/l)								--	--	--	520	--	--	--
Calcium (mg/l)								--	--	--	--	--	--	--
C.O.D. (mg/l)								--	--	--	260	--	--	--

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted. MW-5 not sampled on 5-17-95 due to free product. <"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem. WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ Lower boiling hydrocarbons present.

² Lighter fuels present. Chromatogram has a typical gasoline pattern.

³ Results from pump test after 7 hours of pumping.

See lab reports for additional information.

APPROVED: *GOP* DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-5 (cont.)

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation ⁴					
PAL: Preventative Action Limit				N: Not detected				Ground Elevation				710.50	
ES: Enforcement Standard				L: Detected but less than PQL				Screen Top Elevation				693.50	
MDL: Method Detection Limit				--: Not analyzed				Point elevation				683.50	
TPH: Total Petroleum Hydrocarbons													
GRO: Gasoline Range Organics				Sample Date				5/16/96				4/15/97	7/8/98
DRO: Diesel Range Organics				Depth to Water				21.10				26.70	18.52
VOC: Volatile Organic Compounds				Water Elevation				689.02				683.43	691.61
ORGANICS				MDL Note				2				3	
GRO				50								8,510	
DRO				100								--	
ORGANICS (VOC)				PAL				ES				MDL Notes	
Benzene				0.50				5				0.6	151
Ethylbenzene				140				700				1	177
Toluene				68.6				343				1	353
Total Xylene				124				620				1	--
o-Xylene				124				620				1	636
m- & p- Xylenes				124				620				1	1,190
Methyl-t-butyl ether				12				60				1	484
1,2,4-Trimethyl benzene				96				480				1	700
1,3,5-Trimethyl benzene				96				480				1	261
1,2-dichloroethane				0.5				5				1	--
Naphthalene				8				40				1	243
Lab RNA Parameters				MDL Notes									
Sol. Sulfate								mg/l				78.8	
Nitrate				2				10				mg/l	<0.3
Alkalinity as CaCO ₃												mg/l	478
Sol. Iron (fld fil)												mg/l	10.4
Sol. Manganese (fld fil)												mg/l	2.26
Methane												µg/l	<1.0
Field RNA Parameters													
pH													--
Dissolved Oxygen												mg/l	0.25
Temperature												°C	11
ORGANICS (PAH)				PAL				ES				MDL Notes	MW-5's PAH RESULTS LISTED ON OTHER SHEET
Total PAH													--
INORGANICS (metals)				PAL				ES				MDL Notes	F
Lead				1.5				15					1.04

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ MW-5 not sampled on 5-17-95 due to free product.

² MW-5 not sampled on 5-16-95. Well dry. Short section of well casing at top is loose; it pulled up slightly when removing passive skimmer. Small volume of thick silty liquid removed from well. No free product.

³ MW-5 not sampled on 4-15-97. Well dry.

⁴ Resurveyed 4/97 Old elev. = 710.12

See lab reports for additional information.

APPROVED: *GCP*

DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

PAH, analysis

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-5 (cont.)

ABBREVIATIONS		PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation See prev. sheet				
PAL: Preventative Action Limit		N: Not detected				Ground Elevation				
ES: Enforcement Standard		L: Detected but less than PQL				Screen Top Elevation				
MDL: Method Detection Limit		--: Not analyzed				Point elevation				
TPH: Total Petroleum Hydrocarbons										
GRO: Gasoline Range Organics		Sample Date				4/18/94				
DRO: Diesel Range Organics										
VOC: Volatile Organic Compounds										
ORGANICS (VOC)		PAL	ES	MDL	Notes	SEE PREVIOUS SHEET.				
ORGANICS (PAH)		PAL	ES	MDL	E, P					
Acenaphthene				25		34				
Acenaphthylene				500		N				
Anthracene				10		N				
Benzo(a)anthracene				13	*	N				
Benzo(a)pyrene	0.02	0.2		10		N				
Benzo(b)fluoranthene	0.02	0.2		10	*	N				
Benzo(g,h,i)perylene				15	*	N				
Benzo(k)fluoranthene				10	*	N				
Chrysene	0.02	0.2		13	*	N				
Dibenzo(a,h)anthracene				10	*	N				
Fluoranthene	80	400		10		N				
Fluorene	80	400		50		190				
Indeno(1,2,3-cd)pyrene				10	*	N				
1-Methylnaphthalene				250		1,200				
2-Methylnaphthalene				250		2,000				
Naphthalene	8	40		250		2,000				
Phenanthrene				50	*	N				
Pyrene	50	250		50	*	N				
Total NR 105* PAH						N				
Total PAH						5,424				
INORGANICS (metals)		PAL	ES	MDL	Notes	SEE PREVIOUS SHEET				
OTHER		PAL	ES	MDL	Notes					

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

* Per NR 105, human cancer criteria for PAHs are applicable to any combination of these nine chemicals. Generally, the sum of these nine < 0.1 ppb for surface discharge.

See lab reports for additional information.

APPROVED: GCP

DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-6

ABBREVIATIONS		PAH: Polynuclear Aromatic Hydrocarbons					PVC Elevation ²		710.00	
PAL: Preventative Action Limit		N: Not detected					Ground Elevation		710.25	
ES: Enforcement Standard		L: Detected but less than PQL					Screen Top Elevation		692.25	
MDL: Method Detection Limit		--: Not analyzed					Point elevation		682.25	
TPH: Total Petroleum Hydrocarbons		Sample Date		9/15/94	5/17/95	5/16/96	4/15/97	7/8/98		
GRO: Gasoline Range Organics		Depth to Water		26.50	26.51	27.31	27.32	DRY		
DRO: Diesel Range Organics		Water Elevation		683.51	683.50	682.70	682.68			
VOC: Volatile Organic Compounds										
ORGANICS		MDL Note		1	1	1	1	1		
GRO										
DRO										
ORGANICS (VOC)		PAL	ES	MDL Notes						
Benzene	0.50	5	0.6							
Ethylbenzene	140	700	1							
Toluene	68.6	343	1							
Total Xylene	124	620	1							
o-Xylene	124	620	1							
m- & p- Xylenes	124	620	1							
Methyl-t-butyl ether	12	60	1							
1,2,4-Trimethyl benzene	96	480	1							
1,3,5-Trimethyl benzene	96	480	1							
ORGANICS (PAH)		PAL	ES	MDL Notes						
Total PAH										
INORGANICS (metals)		PAL	ES	MDL Notes						
Lead	1.5	15								
Cadmium	0.5	5								
Iron										
OTHER		PAL	ES	MDL Notes						
pH										
Total Hardness										
TSS (mg/l)										
Calcium (mg/l)										
Oil and Grease										

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

¹ Well was essentially dry and could not be sampled.

² Well resurveyed 4/97 Old elev. 710.01

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: MW-7

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons			PVC Elevation				
PAL: Preventative Action Limit				N: Not detected			710.60				
ES: Enforcement Standard				L: Detected but less than PQL			Ground Elevation				
MDL: Method Detection Limit				--: Not analyzed			710.80				
TPH: Total Petroleum Hydrocarbons							Screen Top Elevation				
GRO: Gasoline Range Organics							695.30				
DRO: Diesel Range Organics							Point elevation				
VOC: Volatile Organic Compounds							685.30				
Sample Date		5/17/95	5/17/95	5/16/96	4/15/97	7/8/98					
Depth to Water		20.81	DUPL.	24.40	21.33	19.00					
Water Elevation		689.79		686.20	689.27	691.60					
ORGANICS				MDL	Note	E	E,D	I	U	U	
GRO			50		110,000	110,000			18,800	3,510	
DRO			100		-	-			--	--	
ORGANICS (VOC)				PAL	ES	MDL	Notes				
Benzene		0.50	5	0.6		22,000	25,000		<25	542	
Ethylbenzene		140	700	1		4,100	6,200		92.2	136	
Toluene		68.6	343	1		32,000	37,000		99.7	22.7	
o-Xylene		124	620	1		4,900	7,600		785	492	
m- & p- Xylenes		124	620	1		11,000	18,000		1,800	350	
Methyl-t-butyl ether		12	60	1		12,000	11,000		<50	98.7	
1,2,4-Trimethyl benzene		96	480	1		2,400	7,500		3,260	290	
1,3,5-Trimethyl benzene		96	480	1		620	2,100		1,050	90.7	
Naphthalene		8	40	1		--	--		--	51.4	
Lab RNA Parameters				MDL Notes							
Sol. Sulfate					mg/l	--	--		--	62.4	
Nitrate		2	10		mg/l	--	--		--	<0.3	
Alkalinity as CaCO ₃					mg/l	--	--		--	393	
Sol. Iron (fld fil)					mg/l	--	--		--	0.07	
Sol. Manganese (fld fil)					mg/l	--	--		--	0.685	
Methane					µg/l	--	--		--	<1.0	
Field RNA Parameters											
pH						--	--		--	--	
Dissolved Oxygen					mg/l	--	--		--	0.22	
Temperature					°C	--	--		--	10.8	
ORGANICS (PAH)				PAL	ES	MDL	Notes				
Total PAH						--	--		--	--	
INORGANICS (metals)				PAL	ES	MDL	Note	F	F	F	F
Lead		1.5	15			150	150	--	22.0	11.6	

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES: 1. On 5-16-96, well did not recharge after a small volume of water and free product had been removed. Bottom of well was completed in silt, creating a small sump below the sandy perched water zone above.

See lab reports for additional information.

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-1

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation				
PAL: Preventative Action Limit				N: Not detected				709.65				
ES: Enforcement Standard				L: Detected but less than PQL				Ground Elevation				
MDL: Method Detection Limit				---: Not analyzed				Screen Top Elevation				
TPH: Total Petroleum Hydrocarbons								Point elevation				
GRO: Gasoline Range Organics				Sample Date	10/12/95	4/16/96	5/15/96	6/21/96	9/25/96	12/11/96	4/15/97	
DRO: Diesel Range Organics				Depth to Water	--	--	--	--	--	--	29.91	
VOC: Volatile Organic Compounds				Water Elevation	--	--	--	--	--	--	679.74	
				Flow Rate (GPM)	--	--	0.15	0.21	0.12	0.1	0.38	
ORGANICS		MDL	Note	E	C, I	C	C	C	C	U		
GRO				8,700	10,000	9,200	11,000	22,000	8,200	24,800		
DRO				--	--	--	--	--	--	--		
ORGANICS (VOC)		PAL	ES	MDL	Notes							
Benzene		0.50	5	0.6		1700	1400	1300	1000	630	510	569
Ethylbenzene		140	700	1		130	140	150	300	360	140	140
Toluene		68.6	343	1		2100	2300	2200	2400	1700	1100	1360
o-Xylene		124	620	1		340	630	590	880	1200	530	2,760
m- & p- Xylenes		124	620	1		730	1300	1300	1900	2300	1000	5,340
Methyl-t-butyl ether		12	60	1		680	1300	1100	930	240	270	601
1,2,4-Trimethyl benzene		96	480	1		190	390	280	750	2500	760	4,840
1,3,5-Trimethyl benzene		96	480	1		69	110	83	210	690	210	1,300
Naphthalene		8	40	1		--	--	--	--	--	170	--
ORGANICS (PAH)		PAL	ES	MDL	Notes							
Total PAH												
INORGANICS (metals)		PAL	ES	MDL	Notes					F	F	
Lead		1.5	15			--	--	2.1	12	--	2.5	1.45
Cadmium		0.5	5			--	--	--	--	--	--	--
Iron						--	--	--	--	--	--	--
OTHER		PAL	ES	MDL	Notes							
pH						--	--	--	--	--	--	--
Total Hardness						--	--	--	--	--	--	--
TSS (mg/l)						--	--	--	--	--	--	--
Calcium (mg/l)						--	--	--	--	--	--	--
Oil and Grease						--	--	--	--	--	--	--

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

1. System pumped for approx. 18 hours following the winter shutdown before sampling.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-1(cont.)

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation			
PAL: Preventative Action Limit				N: Not detected				709.65			
ES: Enforcement Standard				L: Detected but less than PQL				Ground Elevation			
MDL: Method Detection Limit				--: Not analyzed				Screen Top Elevation			
TPH: Total Petroleum Hydrocarbons								Point elevation			
GRO: Gasoline Range Organics				Sample Date	4/15/97	4/16/97	5/14/97	6/25/97	7/24/97	8/25/97	7/8/98
DRO: Diesel Range Organics				Depth to Water	DUPL	--	--	--	--		26.41
VOC: Volatile Organic Compounds				Water Elevation							683.24
				Flow Rate (GPM)	--	--	0.23	--	--	DRY	--
ORGANICS		MDL	Note	D,U	U	U	U	U	U	U	
GRO				28,800	21,600	4,490	14,100	15,100		17,800	
DRO				--	--	--	--	--		--	
ORGANICS (VOC)		PAL	ES	MDL	Notes						
Benzene	0.50	5	0.6	804	463	349	946	567		3,940	
Ethylbenzene	140	700	1	164	172	104	233	58.7		66.5	
Toluene	68.6	343	1	1,820	1,440	484	2050	1150		3,050	
o-Xylene	124	620	1	3,020	1,750	253	1190	389		737	
m- & p- Xylenes	124	620	1	5,860	3,410	607	1880	648		737	
Methyl-t-butyl ether	12	60	1	691	606	219	1280	739		2,200	
1,2,4-Trimethyl benzene	96	480	1	5,180	3,910	324	1540	261		551	
1,3,5-Trimethyl benzene	96	480	1	1,390	1,110	<100	392	76.2		412	
Naphthalene	8	40	1	--	--	--	--	--		136	
Lab RNA Parameters		MDL Notes									
Sol. Sulfate				mg/l	--	--	--	--	--	100	
Nitrate	2	10		mg/l	--	--	--	--	--	3	
Alkalinity as CaCO ₃				mg/l	--	--	--	--	--	433	
Sol. Iron (fld fil)				mg/l	--	--	--	--	--	10.9	
Sol. Manganese (fld fil)				mg/l	--	--	--	--	--	1.9	
Methane				µg/l	--	--	--	--	--	4.6	
Field RNA Parameters											
pH					--	--	--	--	--	--	
Dissolved Oxygen				mg/l	--	--	--	--	--	--	
Temperature				°C	--	--	--	--	--	--	
ORGANICS (PAH)		PAL	ES	MDL	Notes						
Total PAH					--	--	--	--	--	--	
INORGANICS (metals)		PAL	ES	MDL	Note	F				F	
Lead	1.5	15			1.6	--	--	--	--	1.38	

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES:

F = Sample was field filtered.

See lab reports for additional information.

APPROVED: *gcp* DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-2

ABBREVIATIONS					PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation							
PAL: Preventative Action Limit					N: Not detected				710.45							
ES: Enforcement Standard					L: Detected but less than PQL				Ground Elevation							
MDL: Method Detection Limit					--: Not analyzed				Screen Top Elevation							
TPH: Total Petroleum Hydrocarbons									Point elevation							
GRO: Gasoline Range Organics					Sample Date	4/24/96	5/15/96	9/25/96	12/11/96	4/15/97	5/14/97	6/25/97				
DRO: Diesel Range Organics					Depth to Water	--	--	--	--	21.14	--	--				
VOC: Volatile Organic Compounds					Water Elevation	--	--	--	--	689.31	--	--				
					Flow Rate (GPM)	--	0.045	DRY	0.0076	0.14	0.16	--				
ORGANICS					MDL Note	C	C	C	C	U	U	U				
GRO						38,000	280	--	22,000	15,100	10,900	16,700				
DRO						--	--	--	--	--	--	--				
ORGANICS (VOC)					PAL	ES	MDL	Notes								
Benzene					0.50	5	0.6		440	3.8	--	190	2,790	30.3	65.4	
Ethylbenzene					140	700	1		2000	14	--	1400	1,030	302	959	
Toluene					68.6	343	1		5700	36	--	4300	1,500	468	2360	
o-Xylene					124	620	1		3700	25	--	2600	1,670	727	2230	
m- & p- Xylenes					124	620	1		7800	56	--	5200	3,750	1,440	3910	
Methyl-t-butyl ether					12	60	1		100	<1.6	--	<80	<50	<50	<20	
1,2,4-Trimethyl benzene					96	480	1		3500	22	--	1700	2,430	1,340	1760	
1,3,5-Trimethyl benzene					96	480	1		860	5.4	--	380	584	307	421	
Naphthalene					8	40	1		--	--	--	590	--	--	--	
ORGANICS (PAH)					PAL	ES	MDL	Notes								
Total PAH																
INORGANICS (metals)					PAL	ES	MDL	Notes	F							
Lead					1.5	15			--	210	--	--	38.7	--	--	
Cadmium					0.5	5			--	--	--	--	--	--		
Iron									--	--	--	--	--	--		
OTHER					PAL	ES	MDL	Notes								
pH									--	--	--	--	--	--	--	
Total Hardness									--	--	--	--	--	--	--	
TSS (mg/l)									--	--	--	--	--	--	--	
Calcium (mg/l)									--	--	--	--	--	--	--	
Oil and Grease									--	--	--	--	--	--	--	

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES:

F = Sample was field filtered.

See lab reports for additional information.

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-2 (cont.)

ABBREVIATIONS		PAH: Polynuclear Aromatic Hydrocarbons		PVC Elevation		710.45	
PAL: Preventative Action Limit		N: Not detected		Ground Elevation			
ES: Enforcement Standard		L: Detected but less than PQL		Screen Top Elevation			
MDL: Method Detection Limit		--: Not analyzed		Point elevation			
TPH: Total Petroleum Hydrocarbons							
GRO: Gasoline Range Organics		Sample Date	7/24/97	7/8/98			
DRO: Diesel Range Organics		Depth to Water		17.98			
VOC: Volatile Organic Compounds		Water Elevation		692.47			
		Flow Rate (GPM)					
ORGANICS		MDL Note		U	U		
GRO				9000	7,910		
DRO				--	--		
ORGANICS (VOC)		PAL	ES	MDL Notes			
Benzene	0.50	5	0.6	17.9	36.1		
Ethylbenzene	140	700	1	307	361		
Toluene	68.6	343	1	407	959		
o-Xylene	124	620	1	1050	921		
m- & p- Xylenes	124	620	1	1820	1,480		
Methyl-t-butyl ether	12	60	1	78.2	<20		
1,2,4-Trimethyl benzene	96	480	1	1060	730		
1,3,5-Trimethyl benzene	96	480	1	268	193		
Naphthalene	8	40	1	--	361		
Lab RNA Parameters				MDL Notes			
Sol. Sulfate				mg/l	--	63	
Nitrate	2	10		mg/l	--	18.5	
Alkalinity as CaCO ₃				mg/l	--	534	
Sol. Iron (fld fil)				mg/l	--	0.345	
Sol. Manganese (fld fil)				mg/l	--	1.3	
Methane				µg/l	--	<1.0	
Field RNA Parameters							
pH					--	--	
Dissolved Oxygen				mg/l	--	--	
Temperature				°C	--	--	
ORGANICS (PAH)		PAL	ES	MDL Notes			
Total PAH				--	--		
INORGANICS (metals)		PAL	ES	MDL Notes		F	
Lead	1.5	15		--	7.8		

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES:

F = Sample was field filtered.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-3

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation			
PAL: Preventative Action Limit				N: Not detected				711.56			
ES: Enforcement Standard				L: Detected but less than PQL				Ground Elevation			
MDL: Method Detection Limit				--: Not analyzed				Screen Top Elevation			
TPH: Total Petroleum Hydrocarbons								Point elevation			
GRO: Gasoline Range Organics				Sample Date	5/15/96	9/25/96	9/25/96	12/11/96	4/15/97	7/8/98	
DRO: Diesel Range Organics				Depth to Water	--	--	DUPL	--	21.56	19.67	
VOC: Volatile Organic Compounds				Water Elevation	--	--	--	--	690.00	691.89	
				Flow Rate (GPM)	0.11	0.15*	--	0.01 **	--		
ORGANICS											
				MDL Note	C	C	C, D	C	U	2	
GRO					<100	<100	<100	<120	104 ¹		
DRO					--	--	--	--	--		
ORGANICS (VOC)											
				PAL	ES	MDL Note	C	C	C	C	U
Benzene				0.50	5	0.6	<0.8	<1.6	<1.6	<1.6	.78
Ethylbenzene				140	700	1	<1.8	<1.9	<1.9	<1.9	N
Toluene				68.6	343	1	<1.4	<1.7	<1.7	<1.7	N
o-Xylene				124	620	1	<1.9	<1.9	2.1	<1.9	1.31
m- & p- Xylenes				124	620	1	<3.7	<3.9	4.3	<3.9	2.75
Methyl-t-butyl ether				12	60	1	<1.6	<1.5	<1.5	<1.6	N
1,2,4-Trimethyl benzene				96	480	1	<1.9	<1.7	2.7	<1.9	2.10
1,3,5-Trimethyl benzene				96	480	1	<1.8	<2.0	<2.0	<2.0	N
Naphthalene				8	40	1	--	--	--	<3.8	--
ORGANICS (PAH)											
				PAL	ES	MDL Notes					
Total PAH											
INORGANICS (metals)											
				PAL	ES	MDL Notes					
Lead				1.5	15		2.3	--	--	--	--
Cadmium				0.5	5		--	--	--	--	
Iron							--	--	--	--	
OTHER											
				PAL	ES	MDL Notes					
pH							--	--	--	--	--
Total Hardness							--	--	--	--	--
TSS (mg/l)							--	--	--	--	--
Calcium (mg/l)							--	--	--	--	--
Oil and Grease							--	--	--	--	--

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

* Flow rate with vacuum applied. Vacuum applied only for purging and sampling. Normal flow rate is negligible. Vacuum is not normally applied to MW-3.

** Flow rate without vacuum, which has been normal mode for MW-3.

¹ Per lab report, a single compound accounts for most of GRO.

² Not sampled.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-4

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation			
PAL: Preventative Action Limit				N: Not detected				712.61			
ES: Enforcement Standard				L: Detected but less than PQL				Ground Elevation			
MDL: Method Detection Limit				--: Not analyzed				Screen Top Elevation			
TPH: Total Petroleum Hydrocarbons				Sample Date		5/15/96	9/25/96	12/11/96	4/15/97	7/8/98	
GRO: Gasoline Range Organics				Depth to Water		--	--	--	26.04	21.79	
DRO: Diesel Range Organics				Water Elevation		--	--	--	686.57	690.82	
VOC: Volatile Organic Compounds				Flow Rate (GPM)		0.02	0.15 ²	DRY	0.05		
ORGANICS		MDL Note		1	C, 2	C	U	U			
GRO				--	3800	--	1,500	2,470			
DRO				--	--	--	--	--			
ORGANICS (VOC)		PAL	ES	MDL		Notes					
Benzene		0.50	5	0.6	--	18	--	14	134		
Ethylbenzene		140	700	1	--	68	--	51.5	61		
Toluene		68.6	343	1	--	290	--	139	712		
o-Xylene		124	620	1	--	200	--	108	180		
m- & p- Xylenes		124	620	1	--	400	--	294	335		
Methyl-t-butyl ether		12	60	1	--	<7.8	--	N	<10		
1,2,4-Trimethyl benzene		96	480	1	--	190	--	115	106		
1,3,5-Trimethyl benzene		96	480	1	--	100	--	57.1	33.8		
Naphthalene		8	40	1	--	--	--	--	17.9		
Lab RNA Parameters				MDL		Notes					
Sol. Sulfate				mg/l							
Nitrate		2	10	mg/l							
Alkalinity as CaCO ₃				mg/l							
Sol. Iron (fld fil)				mg/l							
Sol. Manganese (fld fil)				mg/l							
Methane				µg/l							
Field RNA Parameters											
pH											
Dissolved Oxygen				mg/l							
Temperature				°C							
ORGANICS (PAH)		PAL	ES	MDL		Notes					
Total PAH				--	--	--	--	--	--		
INORGANICS (metals)		PAL	ES	MDL				F	F		
Lead		1.5	15	--	--	--	--	3.15	<1.0		

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

1. RW-4 not producing enough to sample.
2. RW-4 recovers negligible water. Vacuum applied to only RW-4 in order to purge & sample (-5 psi).

See lab reports for additional information.

APPROVED: *gcp* DATE: 8/24/98

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-5

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons				PVC Elevation			
PAL: Preventative Action Limit				N: Not detected				712.33			
ES: Enforcement Standard				L: Detected but less than PQL				Ground Elevation			
MDL: Method Detection Limit				--: Not analyzed				Screen Top Elevation			
TPH: Total Petroleum Hydrocarbons								Point elevation			
GRO: Gasoline Range Organics				Sample Date	9/7/95	4/16/96	5/15/96	6/21/96	9/25/96	12/11/96	4/15/97
DRO: Diesel Range Organics				Depth to Water	--	--	--	--	--	--	22.57
VOC: Volatile Organic Compounds				Water Elevation	--	--	--	--	--	--	689.76
				Flow Rate (GPM)	--	--	0.75	0.99	0.36	0.25	0.75
ORGANICS				MDL Note	E	C, I	C	C	C	C	U
GRO					100,000	68,000	490	34,000	46,000	25,000	8,680
ORGANICS (VOC)				PAL	ES	MDL	Notes				
Benzene	0.50	5	0.6		18,000	5600	34	1600	450	100	48.3
Ethylbenzene	140	700	1		4000	2500	23	1800	3300	900	132
Toluene	68.6	343	1		29,000	15,000	150	10,000	7300	1100	243
o-Xylene	124	620	1		5100	4300	33	2700	6800	2300	484
m- & p- Xylenes	124	620	1		12,000	9100	76	6400	14,000	5800	1,330
Methyl-t-butyl ether	12	60	1		2,600	270	2.7	330	<150	<80	76.6
1,2,4-Trimethyl benzene	96	480	1		2800	3200	23	2300	6800	2800	768
1,3,5-Trimethyl benzene	96	480	1		730	820	5.7	560	1600	610	275
Naphthalene	8	40	1		--	--	--	--	--	1200	--
ORGANICS (PAH)				PAL	ES	MDL	Notes	P			
Benzo(a)anthracene			50	*	N	--	--	--	--	--	--
Benzo(a)pyrene	0.02	0.2	40		N	--	--	--	--	--	--
Benzo(b)fluoranthene	0.02	0.2	40	*	N	--	--	--	--	--	--
Benzo(g,h,i)perylene			60	*	N	--	--	--	--	--	--
Benzo(k)fluoranthene			40	*	N	--	--	--	--	--	--
Chrysene	0.02	0.2	50	*	N	--	--	--	--	--	--
Dibenzo(a,h)anthracene			40	*	N	--	--	--	--	--	--
Fluorene	80	400	40		110	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene			40	*	N	--	--	--	--	--	--
1-Methylnaphthalene			200		1400	--	--	--	--	--	--
2-Methylnaphthalene			1000		2400	--	--	--	--	--	--
Naphthalene	8	40	200		1800	--	--	--	--	--	--
Phenanthrene			200	*	N	--	--	--	--	--	--
Pyrene	50	250	200	*	N	--	--	--	--	--	--
Total NR 105* PAH					N						--
INORGANICS (metals)				PAL	ES	MDL	Notes	F			
Lead	1.5	15			--	--	33	84	--	31	9.74
OTHER				PAL	ES	MDL	Notes				
Oil and Grease			1000		7000	--	--	--	--	--	--

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

1. System pumped for approx. 18 hours following the winter shutdown before sampling.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

Well I.D.: RW-5 (cont.)

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons			PVC Elevation	
PAL: Preventative Action Limit				N: Not detected			712.33	
ES: Enforcement Standard				L: Detected but less than PQL			Ground Elevation	
MDL: Method Detection Limit				--: Not analyzed			Screen Top Elevation	
TPH: Total Petroleum Hydrocarbons							Point elevation	
GRO: Gasoline Range Organics				Sample Date	5/14/97	8/25/97	7/8/98	
DRO: Diesel Range Organics				Depth to Water			17.30	
VOC: Volatile Organic Compounds				Water Elevation			695.03	
				Flow Rate (GPM)	0.71	-		
ORGANICS				MDL Note				
GRO				U	U	U		
				15,700	6,700	8,740		
ORGANICS (VOC)				MDL Notes				
				PAL	ES	MDL	Notes	
Benzene	0.50	5	0.6	50.4	32.7	81		
Ethylbenzene	140	700	1	330	166	374		
Toluene	68.6	343	1	357	288	1,010		
o-Xylene	124	620	1	1,070	558	881		
m- & p- Xylenes	124	620	1	2,350	1,180	1,670		
Methyl-t-butyl ether	12	60	1	<20	<20	<10		
1,2,4-Trimethyl benzene	96	480	1	2,030	994	802		
1,3,5-Trimethyl benzene	96	480	1	510	237	214		
Naphthalene	8	40	1	--	--	334		
Lab RNA Parameters				MDL Notes				
Sol. Sulfate				mg/l	--	--	62.2	
Nitrate				mg/l	--	--	<0.3	
Alkalinity as CaCO ₃				mg/l	--	--	368	
Sol. Iron (fld fil)				mg/l	--	--	15.2	
Sol. Manganese (fld fil)				mg/l	--	--	0.274	
Methane				µg/l	--	--	2.68	
Field RNA Parameters								
pH					--	--	--	
Dissolved Oxygen				mg/l	--	--	--	
Temperature				°C	--	--	--	
ORGANICS (PAH)				MDL Notes				
Total PAH					--	--	--	
INORGANICS (metals)				MDL Notes			F	
Lead				1.5	15		--	<1.0

Shaded cell indicates Enforcement Standard exceeded.

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES:

F = Sample was field filtered.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

QA/QC

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons							
PAL: Preventative Action Limit				N: Not detected							
ES: Enforcement Standard				L: Detected but less than PQL							
MDL: Method Detection Limit				--: Not analyzed							
TPH: Total Petroleum Hydrocarbons											
GRO: Gasoline Range Organics				Sample Date	4/18/94	8/18/94	9/15/94	9/15/94	5/17/95	5/17/95	5/16/96
DRO: Diesel Range Organics				Sample Type	Trip	Trip	Field Blk	Trip	Field Blk	Trip	Fld Blk
VOC: Volatile Organic Compounds											
ORGANICS											
MDL Notes											
GRO					--	N	--	--	N	N	<100
DRO					--	--	--	--	--	--	--
ORGANICS (VOC)											
	PAL	ES	MDL	Note	E,V	E	E,V	E,V	E	E	C
Benzene	0.50	5	0.6		N	N	N	N	N	N	<0.8
Ethylbenzene	140	700	1		N	N	N	N	N	N	<1.8
Toluene	68.6	343	1		N	N	N	N	N	N	<1.4
o-Xylene	124	620	1		N	N	N	N	N	N	<1.9
m- & p- Xylenes	124	620	1		N	N	N	N	N	N	<3.7
Methyl-t-butyl ether	12	60	1		N	N	N	N	N	N	<1.6
1,2,4-Trimethyl benzene	96	480	1		N	N	N	N	N	N	<1.9
1,3,5-Trimethyl benzene	96	480	1		N	N	N	N	N	N	<1.8
Naphthalene	8	40	2		N	--	N	N	--	--	--
1,2-Dichloroethane	0.5	5	1		N	--	N	N	--	--	--
ORGANICS (PAH)											
	PAL	ES	MDL	Notes							
Total PAH					--	--	--	--	--	--	--
INORGANICS (metals)											
	PAL	ES	MDL	Notes							
Lead	1.5	15			--	--	N	--	--	--	--
Cadmium	0.5	5			--	--	--	--	--	--	--
Iron					--	--	--	--	--	--	--
OTHER											
	PAL	ES	MDL	Notes							
pH					--	--	--	--	--	--	--
Total Hardness					--	--	--	--	--	--	--
TSS (mg/l)					--	--	--	--	--	--	--
Calcium (mg/l)					--	--	--	--	--	--	--
Oil and Grease					--	--	--	--	--	--	--

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

S = Sample analyzed by Swanson Environmental Inc., WI certification # 268181760

T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES:

F = Sample was field filtered.

See lab reports for additional information.

Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

QA/QC (cont.)

ABBREVIATIONS				PAH: Polynuclear Aromatic Hydrocarbons							
PAL: Preventative Action Limit				N: Not detected							
ES: Enforcement Standard				L: Detected but less than PQL							
MDL: Method Detection Limit				--: Not analyzed							
TPH: Total Petroleum Hydrocarbons											
GRO: Gasoline Range Organics											
DRO: Diesel Range Organics											
VOC: Volatile Organic Compounds											
Sample Date	5/16/96	12/11/96	4/15/97	5/14/97	6/25/97	7/24/97	8/25/97				
Sample Type	Trip	Trip	Trip	Trip	Trip	Trip	Trip				
ORGANICS											
				MDL Note	C	C	U	U	U	U	U
GRO				<100	--	N	N	N	N	N	N
DRO				--	--	--	--	--	--	--	--
ORGANICS (VOC)											
	PAL	ES	MDL	Notes							
Benzene	0.50	5	0.6		<0.8	<1.6	N	N	N	N	N
Ethylbenzene	140	700	1		<1.8	<1.9	N	N	N	N	N
Toluene	68.6	343	1		<1.4	<1.7	N	N	N	N	N
o-Xylene	124	620	1		<1.9	<1.9	N	N	N	N	N
m- & p- Xylenes	124	620	1		<3.7	<3.9	N	N	N	N	N
Methyl-t-butyl ether	12	60	1		<1.6	<1.6	N	N	N	N	N
1,2,4-Trimethyl benzene	96	480	1		<1.9	<1.9	N	N	N	N	N
1,3,5-Trimethyl benzene	96	480	1		<1.8	<2.0	N	N	N	N	N
ORGANICS (PAH)											
	PAL	ES	MDL	Notes							
Total PAH											
INORGANICS (metals)											
	PAL	ES	MDL	Notes							
Lead	1.5	15									
Cadmium	0.5	5									
Iron											
OTHER											
	PAL	ES	MDL	Notes							
pH											
Total Hardness											
TSS (mg/l)											
Calcium (mg/l)											
Oil and Grease											

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

Notes: E = Sample Analyzed by EnChem, WI lab certification # 405132750

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T = Sample analyzed by Twin City Testing, WI certification # 999446910

C = Sample analyzed by CBC Environmental Laboratories, Inc., WI certification #241283020

V = Full VOC scan performed (EPA Method 8021); no other compounds included in that method were detected.

P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

B = Analyte found in associated method blank.

NOTES:

F = Sample was field filtered.

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98

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Groundwater Chemistry Summary Data Table

Project Name, Number, and Location: Town of Sheboygan, TSB9301

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QA/QC (cont.)

ABBREVIATIONS		PAH: Polynuclear Aromatic Hydrocarbons			
PAL: Preventative Action Limit		N: Not detected			
ES: Enforcement Standard		L: Detected but less than PQL			
MDL: Method Detection Limit		--: Not analyzed			
TPH: Total Petroleum Hydrocarbons					
GRO: Gasoline Range Organics					
DRO: Diesel Range Organics					
VOC: Volatile Organic Compounds					
		Sample Date	7/8/98		
		Sample Type	Trip		
ORGANICS		MDL Note	U		
GRO			<100		
DRO			--		
ORGANICS (VOC)		PAL	ES	MDL	Notes
Benzene	0.50	5	0.6		N
Ethylbenzene	140	700	1		N
Toluene	68.6	343	1		N
o-Xylene	124	620	1		N
m- & p- Xylenes	124	620	1		N
Methyl-t-butyl ether	12	60	1		N
1,2,4-Trimethyl benzene	96	480	1		N
1,3,5-Trimethyl benzene	96	480	1		N
ORGANICS (PAH)		PAL	ES	MDL	Notes
Total PAH					--
INORGANICS (metals)		PAL	ES	MDL	Notes
Lead	1.5	15			--
Cadmium	0.5	5			--
Iron					--
OTHER		PAL	ES	MDL	Notes
pH					--
Total Hardness					--
TSS (mg/l)					--
Calcium (mg/l)					--
Oil and Grease					--

All results listed as µg/L, which is equivalent to parts per billion, unless otherwise noted.

<"n" denotes not detected where "n" is the detection limit other than listed under MDL.

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P = Full PAH scan performed (EPA Method 8310/HPLC); no other compounds included in that method were detected.

D = Duplicate sample.

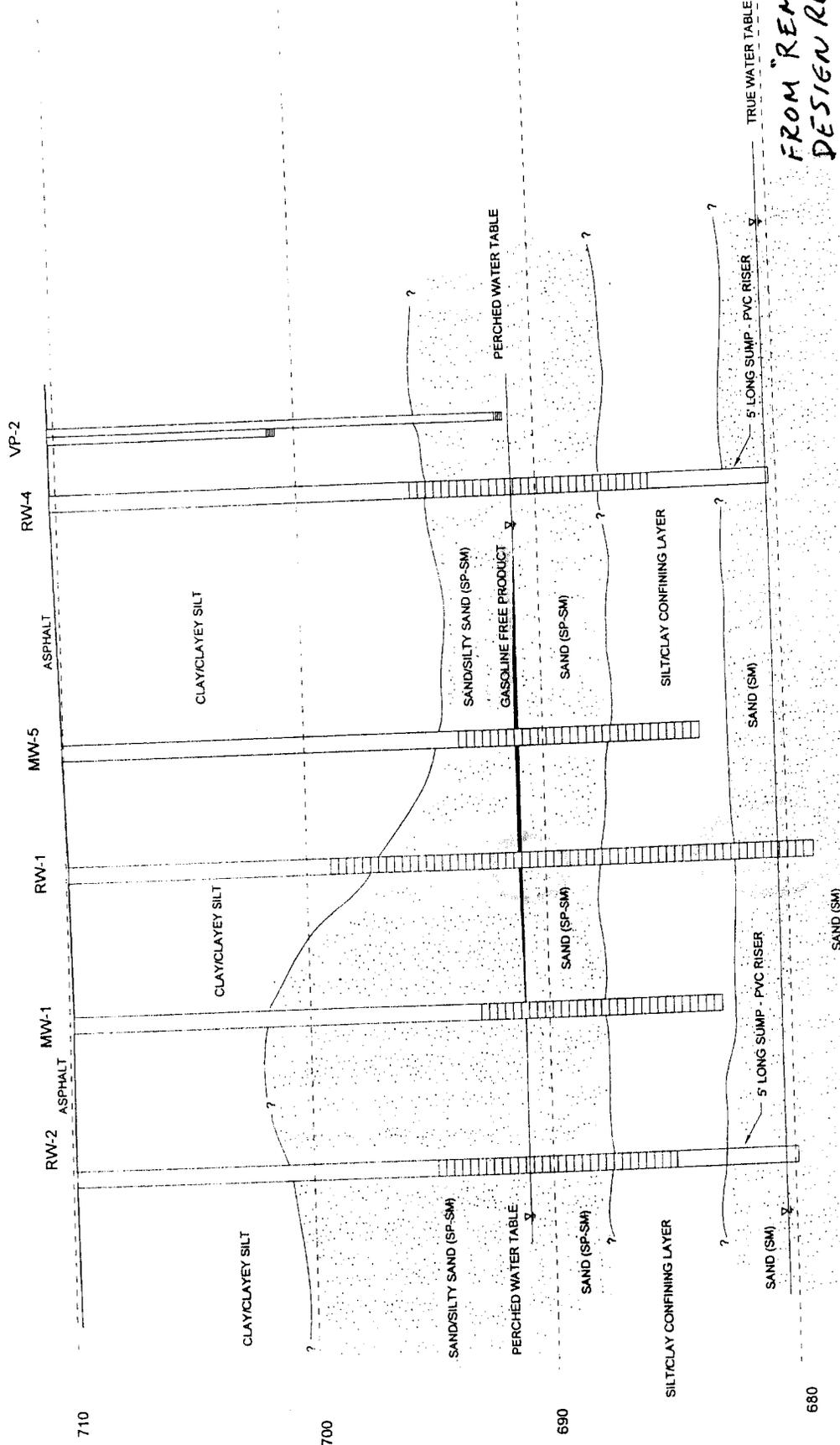
B = Analyte found in associated method blank.

F = Sample was field filtered.

NOTES:

See lab reports for additional information.

APPROVED: *GCP* DATE: 8/24/98



FROM "REMEDIAL ACTION DESIGN REPORT" Dec. '94

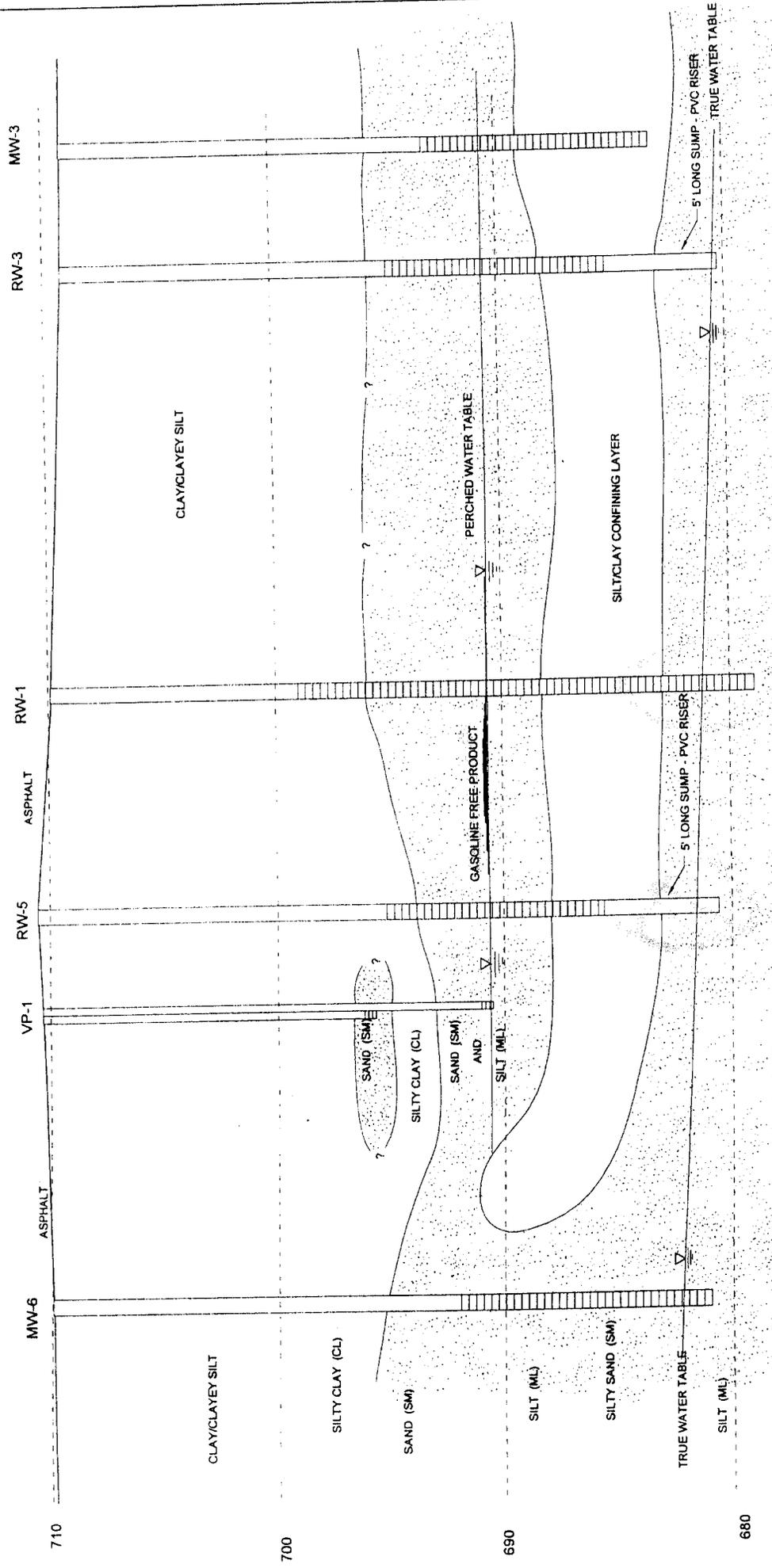
Town of Sheboygan - REMEDIATION SYSTEM

CROSS SECTION A-A		APPVD
REV	DATE	DESCRIPTION

ALPHA TERRA SCIENCE

DATE: NOV. 94
 FILE: TSB-AA-A-SKD
 APPROVED: *[Signature]*
 FIGURE 5

Note: Geologic data shown is based on boring logs from MW-1, MW-5, and VP-2 and RW-1 was not sampled but data is interpolated between MW-1 and MW-5. RW-2 and RW-4 have not yet been installed.



FROM "REMEDIAL ACTION DESIGN REPORT" DEC. 94

Town of Sheboygan - REMEDIATION SYSTEM	
CROSS SECTION B-B	
REV	DATE
	DESCRIPTION
	APPVD
DATE: NOV. 84	FILE: TSB-XB-B SKD
APPROVED: <i>[Signature]</i>	FIGURE 6

Note: Geologic data shown is based on boring logs from MW-6, VP-1, and MW-3. RW-1 was not sampled but data was interpolated between MW-1 and MW-5. RW-3 and RW-5 have not yet been installed.

ALPHA TERRA
SCIENCE