

Y agree - View Today
Y agree
[Signature]

MEMORANDUM

Agree to delete 03-36-286308
4-7-10 5-14-2010

TO: File

FROM: Bob Klauk

SUBJECT: UST abandonment @ former Susie's Restaurant; Remove second BRRTS #

ERP-02-36-516 (1994)
03-36-286308 (2001)

01 2 UST
01 2 UST
03-36-286308

UST Closure Assessment

On September 19, 2001, during construction of the HWY 151 project in Manitowoc, an underground storage tank was encountered on the former Susie's Restaurant site. Former businesses on the site included the Manitowoc Oil Company (till 1928) and Normington Cleaners. On September 21, 2001, RMT and SGS, Inc. mobilized to the site to abandon the UST. During abandonment activities, two additional UTSs were discovered. Two were 500-gallon UTSs and the third was a 200-gallon UST. All three USTs were buried vertically. There were holes in two of the three USTs. RMT reported that they thought the USTs were used to store product or spent solvents used by Normington Cleaners.

All three UTSs were properly abandoned. A BRRTS# was opened for the UST release on October 4, 2001. One soil sample was collected from the base of the USTs after removal. Results of the analytical are as follows:

- Benzene less than 28 ug/kg
- Ethylbenzene less than 28 ug/kg
- Toluene less than 28 ug/kg
- Xylenes 198 ug/kg
- Trimethylbenzenes 1200 ug/kg
- MTBE less than 28 ug/kg
- cis-1,2-Dichloroethene 170 ug/kg

Water was present in all three USTs; samples for lab analytical were collected from two. Groundwater is generally between 8 and 9 feet bgs at the location of the USTs, and, therefore, the water in the tanks is considered to be from groundwater inflow into the tanks. The location of the USTs is presented on the attached figure.

Site Groundwater Characteristics

In September 1993, a groundwater monitoring well was installed on the former Susie's Restaurant site as part of a down gradient investigation for Schmidt's

L 03-36-600120

Tire and Muffler. Generally, soils on-site consist of five feet of fill underlain by well graded sand to 11 feet bgs underlain by lean clay. Depth to shallow gw is from 8 to 9 feet bgs with flow to the northeast. The soil boring log and gw flow map are attached. Groundwater analytical results for wells on and in the vicinity of the site are presented on an attached figure.

Soil and Groundwater Investigations

Prior to the USTs being discovered, a BRRTS # had been opened for the site on March 24, 1994 for the site as a result of a Phase II hazardous materials investigation conducted for the site by STS. The investigation involved advancement of soil borings and analysis of soil and groundwater samples. Results of the gw analysis are presented on an attached figure. Results indicated the shallow gw aquifer was contaminated with chlorinated solvents.

In September 1994, STS conducted a Phase III hazardous materials investigation that included advancing 12 direct-push soil borings. Soil and groundwater samples were analyzed in the field using a gas chromatograph. Groundwater and soil results further identified chlorinated contamination on the site. Attached figures present soil and gw contamination results from the analysis.

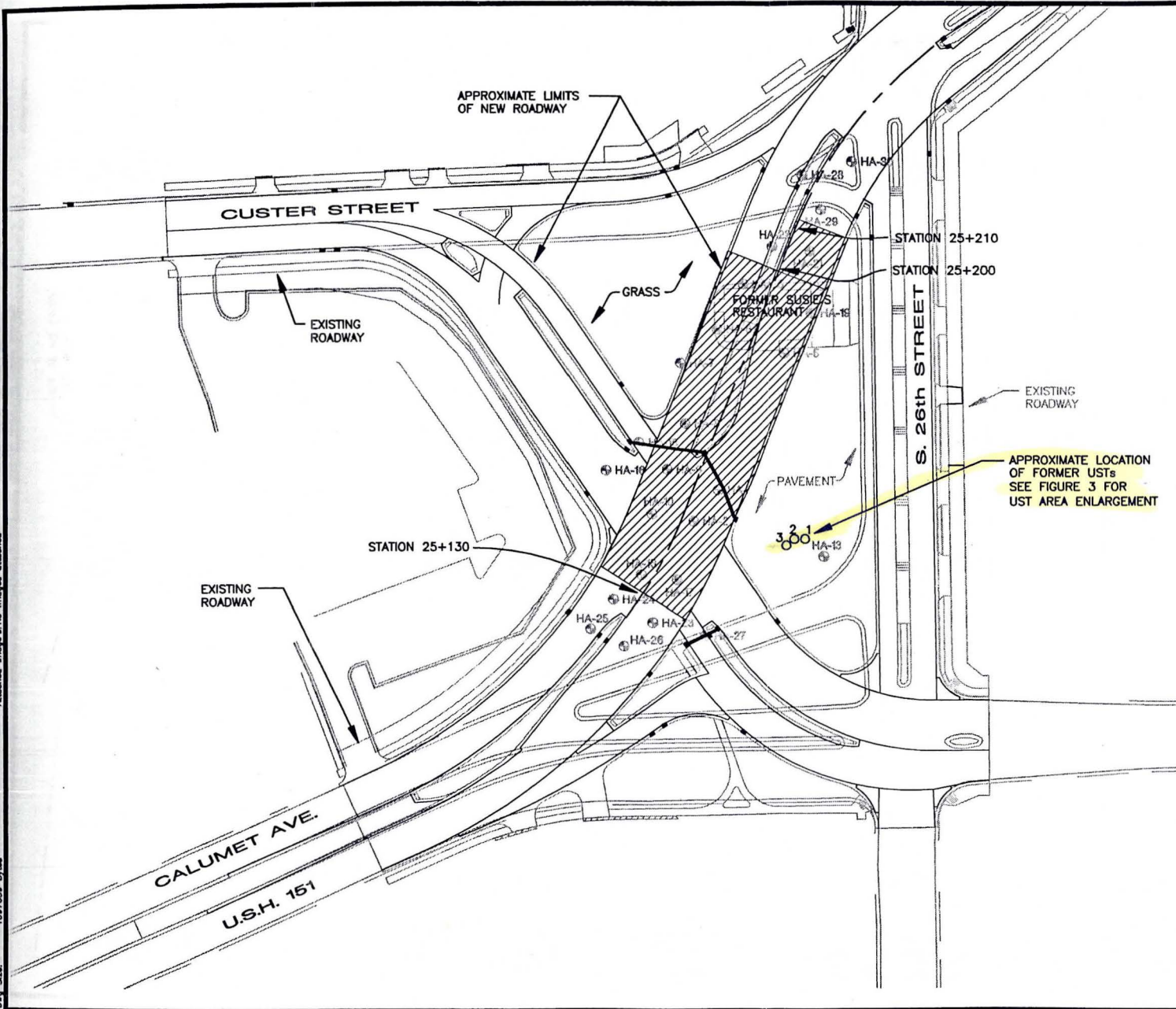
In June 1997, a Phase 2 1/2 site investigation was conducted by STS. Seven soil probes were advanced to define the extent of off-site extent of contamination. Results are presented on an attached figure.

Recommendation:

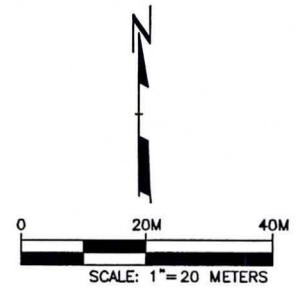
Because a number of soil and groundwater investigations have been conducted on the former Susie's Restaurant site that have encompassed the area occupied by the former chlorinated solvent USTs, I recommend that the separate BRRTS # opened for the USTs be eliminated.

02-36-00516
3-1994 - chlor solv
Case opened as result
of down grad. sampling
for Schmitts (03-36-120)
9-1994 - Phase III
6-97 - Phase II
9-2001 - UST Discrow (vat)
9-2001 - 2 add UST (vat)

Drawing Name: U.S. 151 - Calumet Avenue
 Project Name: U.S. 151 - Calumet Avenue
 Scale: 1" = 20'
 Date: October 3, 2001
 Project: 4100-09-71
 File: 4100-09-71-001.dwg
 Author: [Name]
 Date: [Date]
 Project: [Project]
 File: [File]
 Author: [Name]
 Date: [Date]



- LEGEND**
- ⊙ HA-1 HAND AUGER SAMPLE LOCATION (RMT, 2001)
 - CONTAMINATED SOIL AREA WITHIN LIMITS OF CONSTRUCTION
 - CONTAMINATED SOIL WITHIN SEWER CONSTRUCTION LIMITS
- NOTES**
1. TOP OF USTs WERE APPROXIMATELY 4 FEET BELOW GROUND SURFACE.
 2. USTs #1 AND #2 WERE 500 GALLON CAPACITY AND UST #3 WAS 200 GALLON CAPACITY.



PROJECT:		
SITE PLAN PROJECT ID. 4100-09-71		
SHEET TITLE:		
U.S. 151 - CALUMET AVENUE MANTOWOC, WISCONSIN		
DRAWN BY: SIEWERTD	SCALE: 1"=20 METERS	PROJ. NO. 10716.04
CHECKED BY: [Signature]		FILE NO. WEM-0.10716.04-001.DWG
APPROVED BY: [Signature]	DATE PRINTED:	FIGURE 2
DATE: OCTOBER 2001		
 744 Heartland Trail Madison, WI 53717-1034 P.O. Box 8923 53708-8923 Phone: 608-831-4444 Fax: 608-831-3334		

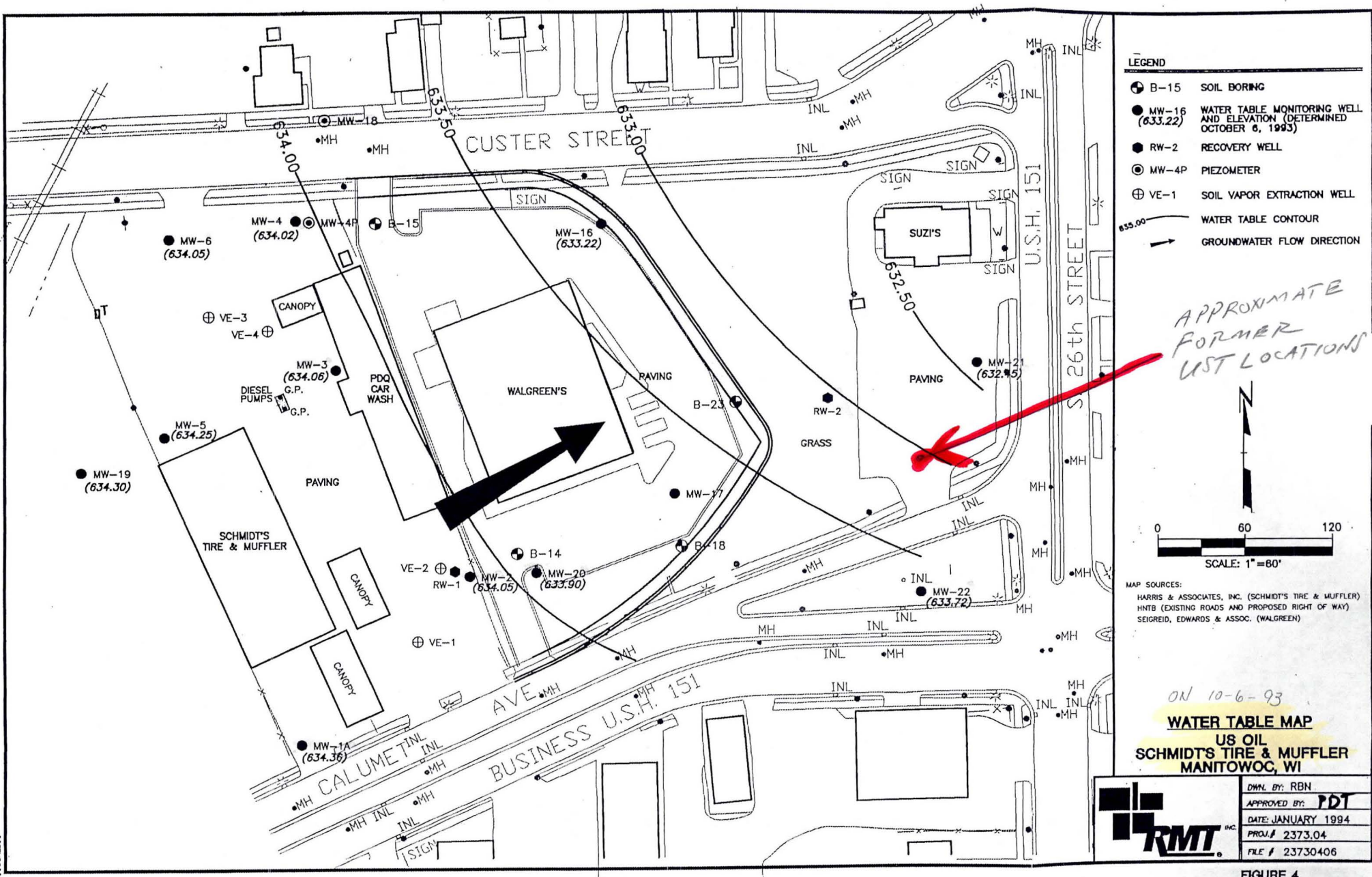
Facility/Project Name US OIL MANITOWOC 2373.04			License/Permit/Monitoring Number		Boring Number MW-21	
Boring Drilled By (Firm name and name of crew chief) ETI, Crew Chief: Todd Coates			Date Drilling Started 9/30/93		Date Drilling Completed 9/30/93	
DNR Facility Well No.			WI Unique Well No.		Common Well Name	
					MW-21	
Final Static Water Level 632.9 Feet MSL			Surface Elevation 641.4 Feet MSL		Borehole Diameter 8.0 Inches	
Boring Location State Plane 769463.10 N, 2577883.79 E			Lat ° ' "		Local Grid Location (If applicable)	
NE 1/4 of SE 1/4 of Section 25 T 19 N,R 23E			Long ° ' "		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
County Manitowoc			DNR County Code 36		Civil Town/City/ or Village Manitowoc	

Sample Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200		
1	3	55/5"	1-2	FILL, GRAVEL AND SAND, very dense.					-	D					SS
2	6	8	2-4						-						SS
3	12	13	4-6	SANDY LEAN CLAY WITH GRAVEL (CL), 80% fines, 20% sand, plastic, black, medium dense, no odor.	CL				-	D					SS
4	10	15	6-8	WELL GRADED SAND WITH GRAVEL (SW), yellowish brown 10YR 5/6, medium dense.	SW				-	W					SS
5	20	18	8-10						-						SS
6	20	11	10-12	LEAN CLAY (CL), trace gravel, gray 10YR 5/1, plastic, medium stiff.	CL				-	W					SS

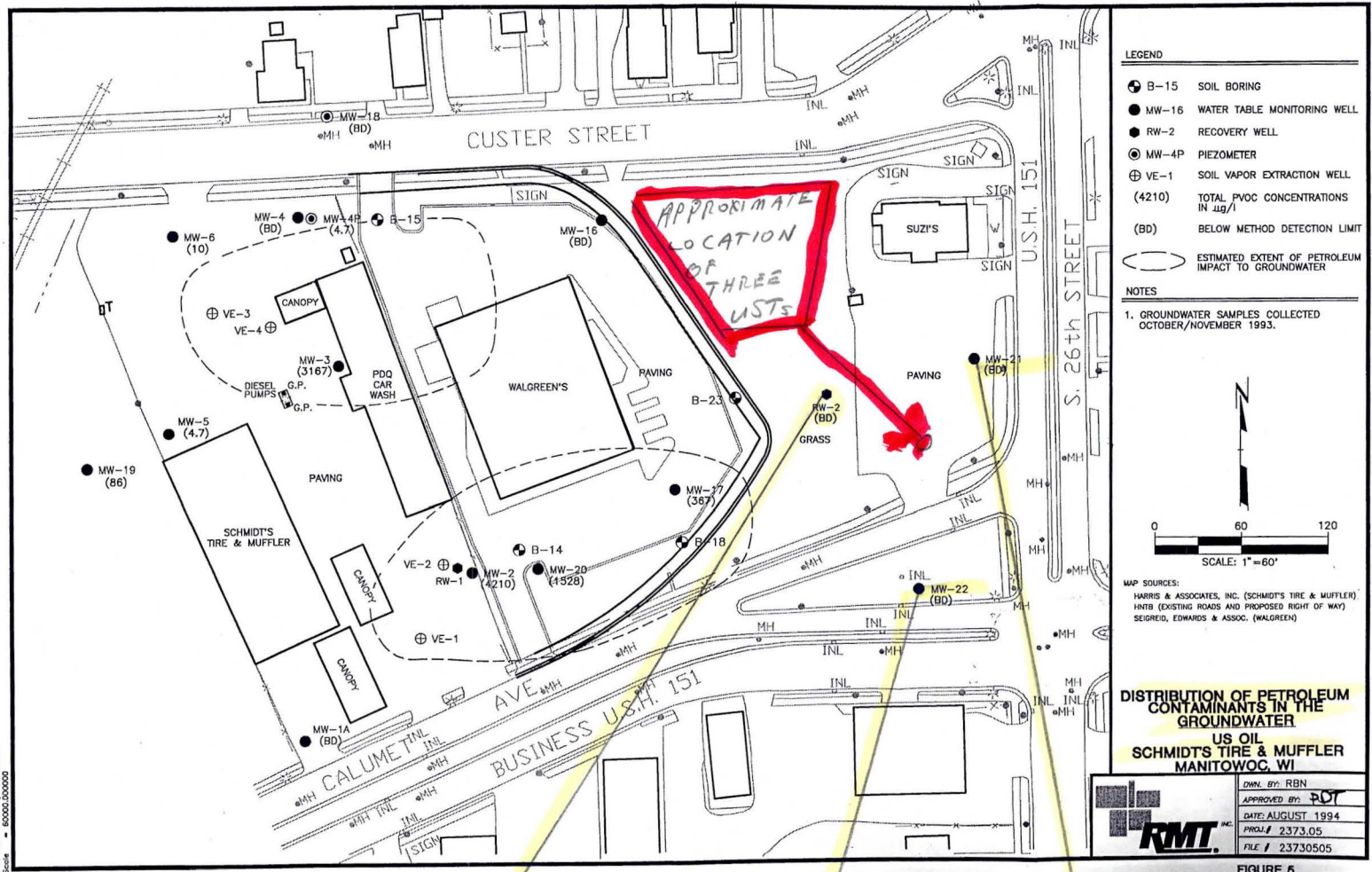
I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Robert E. Rejmanster</i>	Firm RMT 744 Heartland Trail, Madison Wisconsin Tel: 608-831-4444, Fax: 608-831-3334
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This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.



DEPTH TO GW \approx 8, 9 FEET BGS.



- LEGEND**
- B-15 SOIL BORING
 - MW-16 WATER TABLE MONITORING WELL
 - RW-2 RECOVERY WELL
 - MW-4P PIEZOMETER
 - ⊕ VE-1 SOIL VAPOR EXTRACTION WELL
 - (4210) TOTAL PVOCS CONCENTRATIONS IN $\mu\text{g/l}$
 - (BD) BELOW METHOD DETECTION LIMIT
 - ESTIMATED EXTENT OF PETROLEUM IMPACT TO GROUNDWATER
- NOTES**
- GROUNDWATER SAMPLES COLLECTED OCTOBER/NOVEMBER 1993.

MAP SOURCES:
 HARRIS & ASSOCIATES, INC. (SCHMIDT'S TIRE & MUFFLER)
 HARB (EXISTING ROADS AND PROPOSED RIGHT OF WAY)
 SEGRED, EDWARDS & ASSOC. (WALGREEN'S)

DISTRIBUTION OF PETROLEUM CONTAMINANTS IN THE GROUNDWATER
 US OIL
 SCHMIDT'S TIRE & MUFFLER
 MANITOWOC, WI

DWN. BY: RBN
 APPROVED BY: **RJT**
 DATE: AUGUST 1994
 PROJECT: 2373.05
 FILE: 23730505

RMT, INC.

FIGURE 5

Well	Date	Concentration
RW-2	10/2/93	
B	-	<10.0
E	-	↓
T	-	↓
X	-	<30.0
M	-	<10.0
R	-	<10.0
CIS-12-OCE		190
TCE		56

Well	Date	Concentration
MW-22	10/6/93	
B	-	<1.0
E	-	↓
T	-	↓
X	-	<3.0
M	-	<1.0
R	-	<1.0
CIS-12-OCE		5.1

Well	Date	Concentration	Notes
MW-21	10/6/93		
B	-	<1.0	ANAL.
E	-	<1.0	FOR
T	-	<1.0	PVOCS
X	-	<2.0	
M	-	<1.0	
R	-	<1.0	

REMEDIAL INVEST. RPT. - RMT - FOR SCHMIDT'S TIRE

B-8	12/93
B	- 0.2
E	- <1.0
T	- <2.0
X	- <1.0
DCE	- 7.9
TCE	- 20.0
PCE	- 105
VC	- <0.2

B-1	12/93
B	- <0.2
E	- <1.0
T	- 3.8
X	- 1.4
DCE	- <2.9
TCE	- 0.6
PCE	- <0.5
VC	- <0.2

B-4	12/93
B	- 5.1
E	- 6.5
T	- <10.0
X	- 35.3
DCE	- 45.8
TCE	- 7.1
PCE	- <2.5
VC	- 17.5

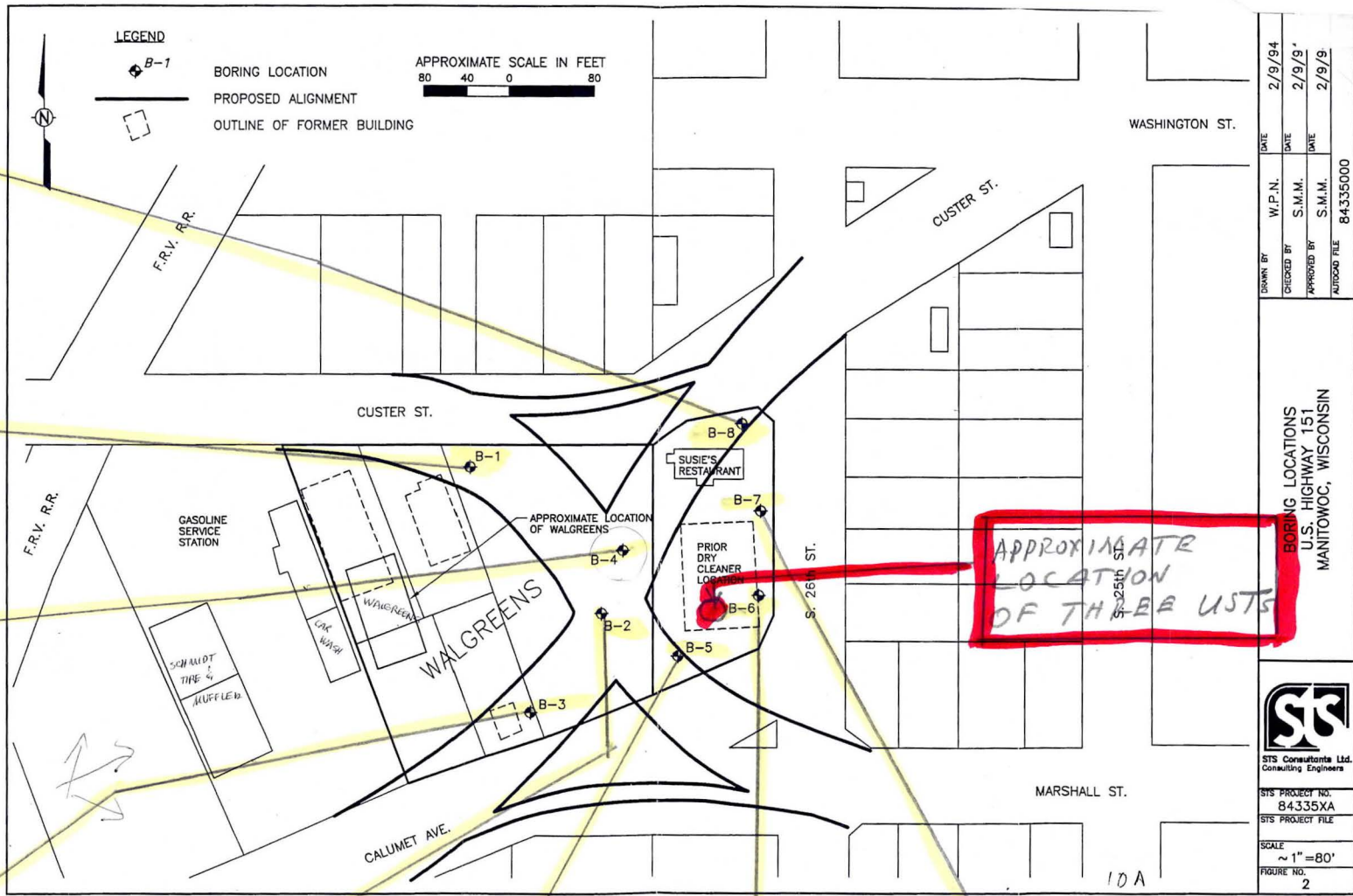
B-3	12/93
B	- 4.9
E	- <1.0
T	- <2.0
X	- <1.0
DCE	- 34.6
TCE	- 0.5
PCE	- <0.5
VC	- 9.8

B-2	12/93
B	- 0.3
E	- <1.0
T	- <2.0
X	- <1.0
DCE	- 3.9
TCE	- 13.2
PCE	- <0.5
VC	- <0.2

B-5	12/93
B	- 1.1
E	- 1.7
T	- 2.6
X	- 6.9
DCE	- 148
TCE	- 0.6
PCE	- 1.7
VC	- 37.9

B-6	12/93
B	- 0.6
E	- 1.1
T	- <2.0
X	- <1.0
DCE	- 120.4
TCE	- 1.7
PCE	- 1.8
VC	- 10.5

B-7	12/93
B	- <1.0
E	- <5.0
T	- <10.0
X	- <5.0
DCE	- 167
TCE	- 11.6
PCE	- 7.7
VC	- 9.8



APPROXIMATE LOCATION OF THREE USTs

DATE	2/9/94
W.P.N.	2/9/94
CHECKED BY	S.M.M.
APPROVED BY	S.M.M.
AUTOCAD FILE	84335000
BORING LOCATIONS U.S. HIGHWAY 151 MANITOWOC, WISCONSIN	
STS Consulting Engineers STS PROJECT NO. 84335XA SCALE 1"=80' FIGURE NO. 2	

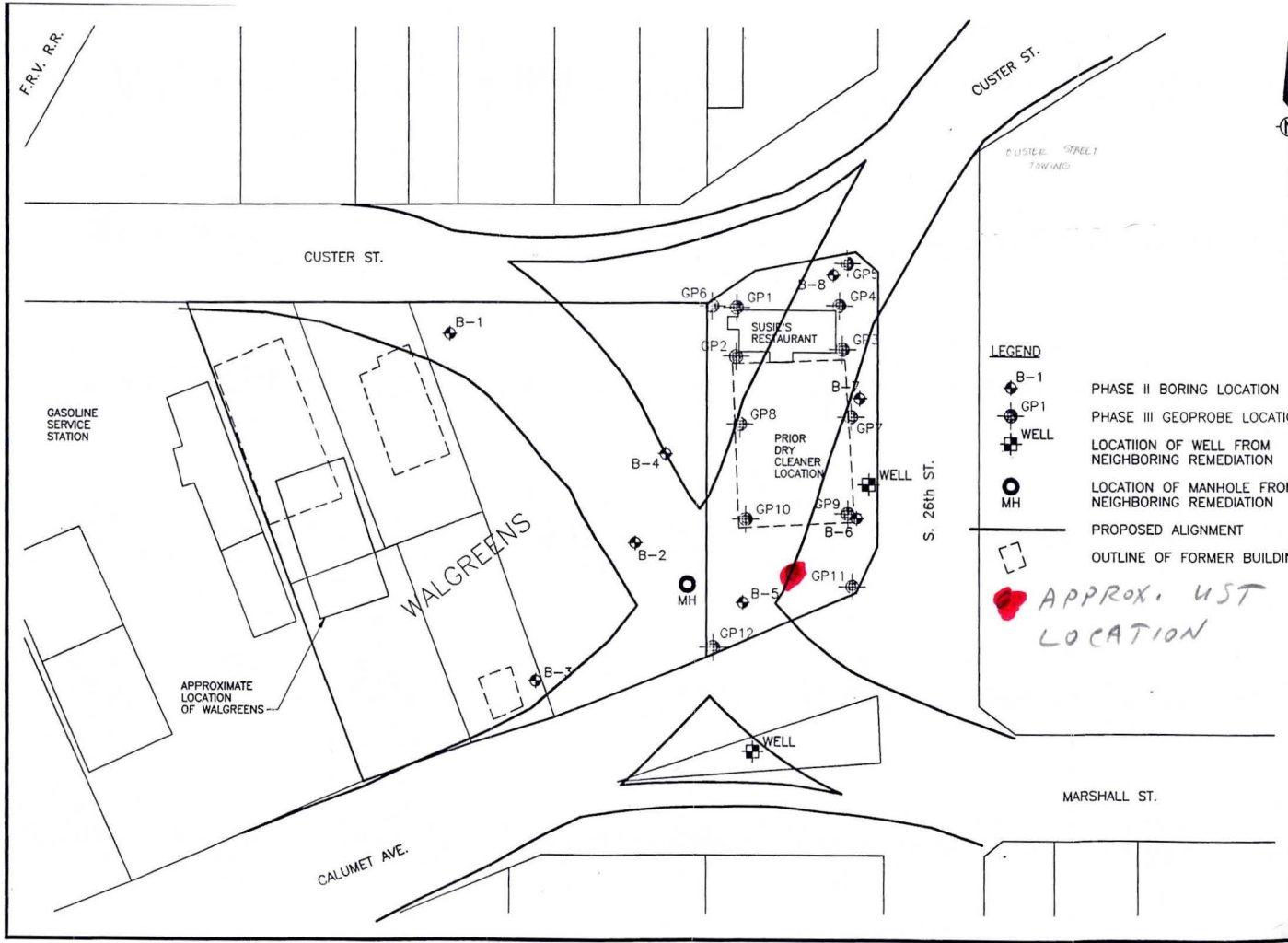
GW collected from soil borings - ^{PHASE II} STS Haz Materials Investigation of Walgreens & Susie's Restaurant properties.

DATE 11/8/94
 CHECKED BY J.M.L. DATE 11/8/94
 APPROVED BY S.M.M. DATE 11/8/94
 DRAFT 84526001

BORING AND GEOPROBE LOCATIONS
 PHASE III SUSIE'S RESTAURANT
 U.S. HIGHWAY 151
 MANITOWOC, WISCONSIN



STS Consultants Ltd.
 Consulting Engineers
 STS PROJECT NO. 84526XA
 STS PROJECT FILE
 SCALE ~ 1" = 60'
 FIGURE NO. 1



GP-9	PID	DCE	TCE	PCE
0-2	<1			
2-4	↓			
4-6	↓			
6-8	↓			
8-10	2	ND	ND	<2
10-12	<1			
12-14	↓			
14-16	↓	ND	ND	<2

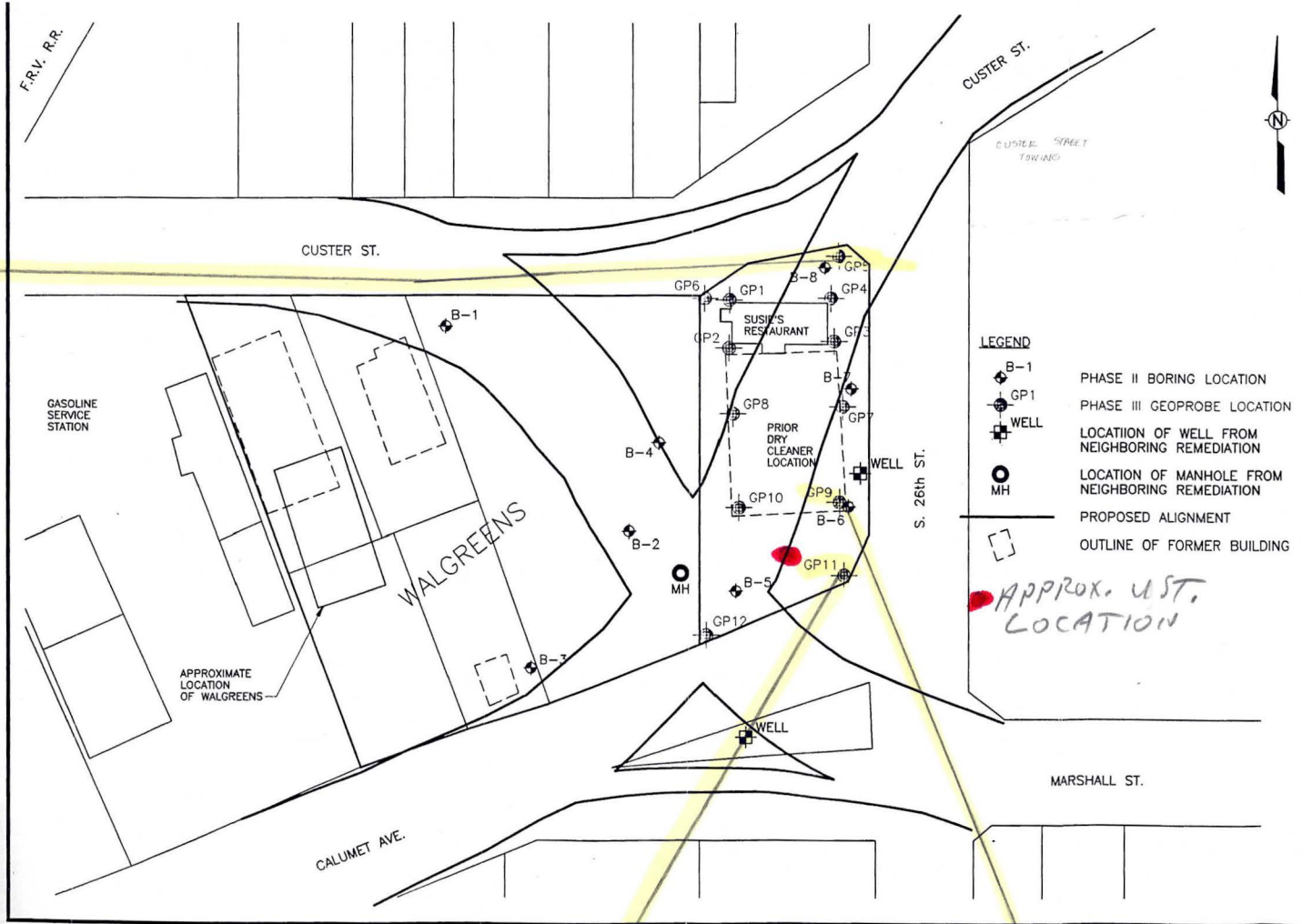
PHASE III
 HAZ
 MAT.
 INV.
 STS
 SUSIE'S RESTAURANT
 12-22-94
 FIELD GC
 RESULTS

GP-10	PID	DCE	TCE	PCE
0-2	<1			
2-4	2	ND	ND	124
4-6	1.4			
6-8	<1			
8-10	↓			
10-12	↓			
12-14	↓			
14-16	↓			
16-18	↓			
18-20	↓			
20-22	<1			
22-24	<1	ND	ND	<2

GP-12	PID	DCE	TCE	PCE
0-2	<1			
2-4	↓			
4-6	↓			
6-8	↓	NO	ND	ND
8-10	↓			
10-12	↓			
12-14	↓			
14-16	↓	ND	ND	ND

GP-11	PID	DCE	TCE	PCE
0-2	<1			
2-4	↓			
4-6	↓			
6-8	↓			
8-10	180	ND	ND	6
10-12	<1			
12-14	↓			
14-16	↓			
16-18	↓			
18-20	↓			
20-22	↓			
22-24	↓	ND	ND	ND

GP-5
 DCE - 26
 TCE - 30
 PCE - 28



DATE	11/8/94
DATE	11/8/94
DATE	
DATE	

BORING AND GEOPROBE LOCATIONS
 PHASE III SUSIE'S RESTAURANT
 U.S. HIGHWAY 151
 MANITOWOC, WISCONSIN



STS Consultants Ltd.
 Consulting Engineers

STS PROJECT NO.
 84526XA

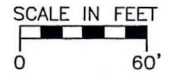
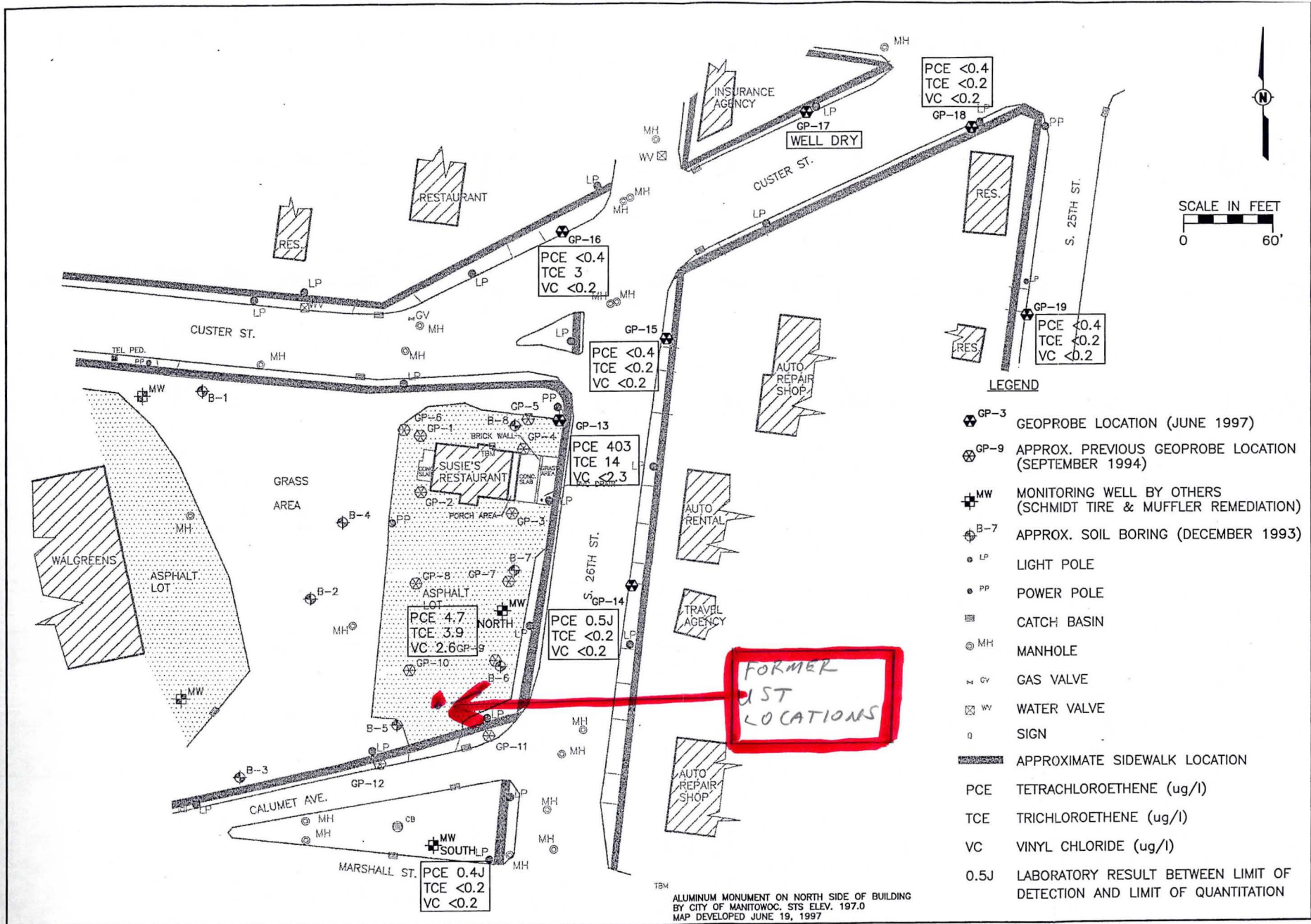
SCALE
 ~ 1" = 60'
 FIGURE NO.
 1

PHASE III
 HAZ. MAT. INV.
 STS
 SUSIE'S
 FIELD GC
 RESULTS

GP-11
 DCE - ND
 TCE - 2
 PCE - <2

GP-9
 DCE - 133
 TCE - <2
 PCE - <2

projects\85308\VA\G5308003 Wed Jul 02 09:02:30 1997 STS CONSULTANTS LTD., MILWAUKEE, WISCONSIN



LEGEND

- GP-3 GEOPROBE LOCATION (JUNE 1997)
- GP-9 APPROX. PREVIOUS GEOPROBE LOCATION (SEPTEMBER 1994)
- MW MONITORING WELL BY OTHERS (SCHMIDT TIRE & MUFFLER REMEDIATION)
- B-7 APPROX. SOIL BORING (DECEMBER 1993)
- LP LIGHT POLE
- PP POWER POLE
- CB CATCH BASIN
- MH MANHOLE
- CV GAS VALVE
- WV WATER VALVE
- SIGN
- APPROXIMATE SIDEWALK LOCATION
- PCE TETRACHLOROETHENE (ug/l)
- TCE TRICHLOROETHENE (ug/l)
- VC VINYL CHLORIDE (ug/l)
- 0.5J LABORATORY RESULT BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

TBM ALUMINUM MONUMENT ON NORTH SIDE OF BUILDING BY CITY OF MANITOWOC, STS ELEV. 197.0 MAP DEVELOPED JUNE 19, 1997

DRAWN BY	DTB/JMI	DATE	7-2-97
CHECKED BY	SMM	DATE	7-2-97
APPROVED BY	TWK	DATE	7-2-97
CADFILE	PROJECTS\85308\VA\G5308003.DWG		
XREF	=G5308000		

GROUNDWATER TCE, PCE AND VINYL CHLORIDE CONCENTRATIONS 6-5-97
 SUSIE'S RESTAURANT
 U.S. HIGHWAY 151
 MANITOWOC, WISCONSIN



STS PROJECT NO.	85308XA
STS PROJECT FILE	

SCALE	AS SHOWN
FIGURE NO.	7

STS PHASE 2 1/2 SITE INVEST. RPT.