

September 2, 1999

SEP 0 7 1999 LMD SOLID WASTE

Ms. Kristin Nell Wisconsin Department of Natural Resources 1125 North Military Avenue P.O. Box 10448 Green Bay, Wisconsin 54307-0448

Subject: Project Status Report, One Hour Martinizing, 1233 South Military Avenue, Green Bay, Wisconsin -- WDNR ERP Case No. 02-05-217270 -- STS Project No. 24871XF

Dear Ms. Nell:

On behalf of our client, P.F. Fink, Inc., STS Consultants, Ltd. (STS), is submitting this project status report to request the Department's opinion regarding implementation of an immediate response and to get a determination regarding hazardous waste classifications. The report presents documentation of the installation of soil borings and monitoring wells to collect soil and groundwater samples, presents field-screening and laboratory results of soil and groundwater samples, and presents recommendations for further action. This work was performed in substantial accordance with the *Work Plan for Site Assessment* dated April 28, 1999.

On June 4 and June 7, 1999, five soil borings were advanced in the vicinity of the dry cleaning facility to determine the vertical and horizontal extent of impacted soil and groundwater. Four soil borings were converted to groundwater monitoring wells (MW-1 through MW-4), and one soil boring was converted to a piezometer (PZ-1). The monitoring wells and piezometer were installed in accordance with Wisconsin Administrative Code Chapter NR 141. Monitoring well locations are indicated on the attached Figure 1. Following monitoring well installation, the wells were gauged and sampled on June 17, 1999. Soil and groundwater samples were submitted to a Statecertified analytical laboratory for the analysis of volatile organic compounds (VOCs). A summary of soil and groundwater analyses is attached. Laboratory analytical reports are also attached.

### **Results:**

Relative groundwater elevations were recorded during the June 17, 1999, sampling event. The June 1999 groundwater elevations were used to plot the approximate groundwater contours shown on Figure 2. Groundwater contours indicated on Figure 2 show groundwater mounding conditions

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near Monitoring Wells MW-3 and MW-1 and Piezometer PZ-1. The mounding conditions could be caused by roof runoff to the grassy area in the immediate rear of the building, fill material near the building foundation wall, the influence of the utility trench to the immediate south of the grassy area, or a combination of these factors.

As indicated on the attached summary of Soil Analytical Results, chlorinated compounds were detected in the vadose zone near PZ-1. Also indicated on the attached Soil Analytical Results summary table are the soil analytical results from the Northern Environmental Phase II Environmental Site Assessment dated March 23, 1999. Northern Environmental's March 1999 soil sampling results show vadose zone chlorinated compound detects at three locations. Soil tetrachloroethene (Perc) concentrations are illustrated on Figure 2. In addition to PZ-1, Perc was also detected in the soil sample collected near the apparent water table elevation in MW-2 and MW-3.

As indicated on the attached summary of Groundwater Analytical Results, chlorinated compounds were detected in exceedance of Wisconsin Administrative Code Chapter NR 140 enforcement standards (ES) in Monitoring Wells MW-1 and MW-3 and Piezometer PZ-1. Groundwater Perc concentrations are indicated on Figure 1.

### **Recommendations for Further Action:**

To further define the extent and degree of groundwater impacts at the site, STS is recommending the installation of two additional monitoring wells (MW-5 and MW-6) in the areas indicated on Figure 3. We are also recommending VOC sampling on all wells, including the proposed MW-5 and MW-6. Following the additional sampling round, remedial action recommendations will be provided in a subsurface investigation report. Given the high concentration of Perc in groundwater at MW-1 and in soil at B100B, we are considering implementation of an immediate response. An immediate response appears appropriate to reduce potential off-site migration of Perc via groundwater and utility trenches.

We are requesting that the Wisconsin Department of Natural Resources (WDNR) provide us with clarification as to whether or not emissions from a soil vapor extraction system for the remediation of chlorinated compounds would be considered a hazardous waste and would have to be treated accordingly. Currently, STS is evaluating soil vapor extraction as the recommended immediate response to be implemented as soon as a determination is made.

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If you have any questions regarding this project status report, please contact us at 920-468-1978.

Sincerely,

STS CONSULTANTS, LTD.

Paul M. Garvey Project Scientist

Mark A. Bergeon, P.G. Principal Geologist

PMG/kjw.wd

### **Enclosures:**

Figure 1 - Groundwater Tetrachloroethene Concentrations

Figure 2 - Soil Tetrachloroethene Concentration

Figure 3 - Groundwater Contour Map (6-17-99)

Figure 4 - Proposed Monitoring Well Locations

Soil Analytical Results

Groundwater Analytical Results

WDNR Soil Boring Log Information Forms

WDNR Monitoring Well Construction Forms

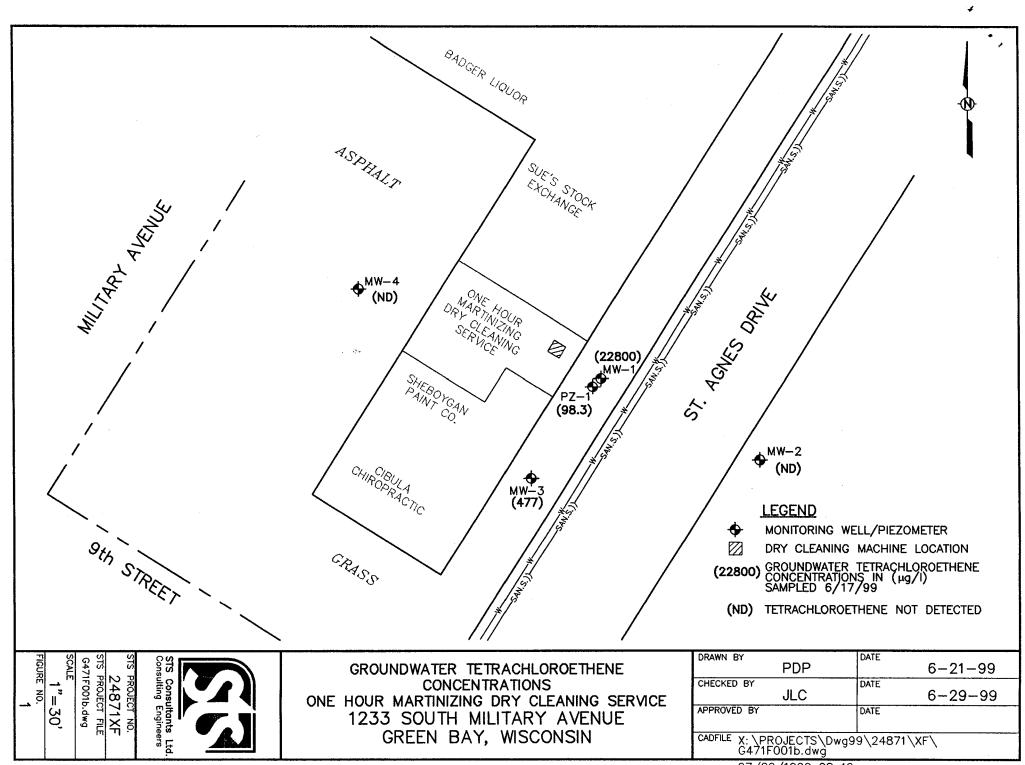
WDNR Monitoring Well Development Forms

Laboratory Reports

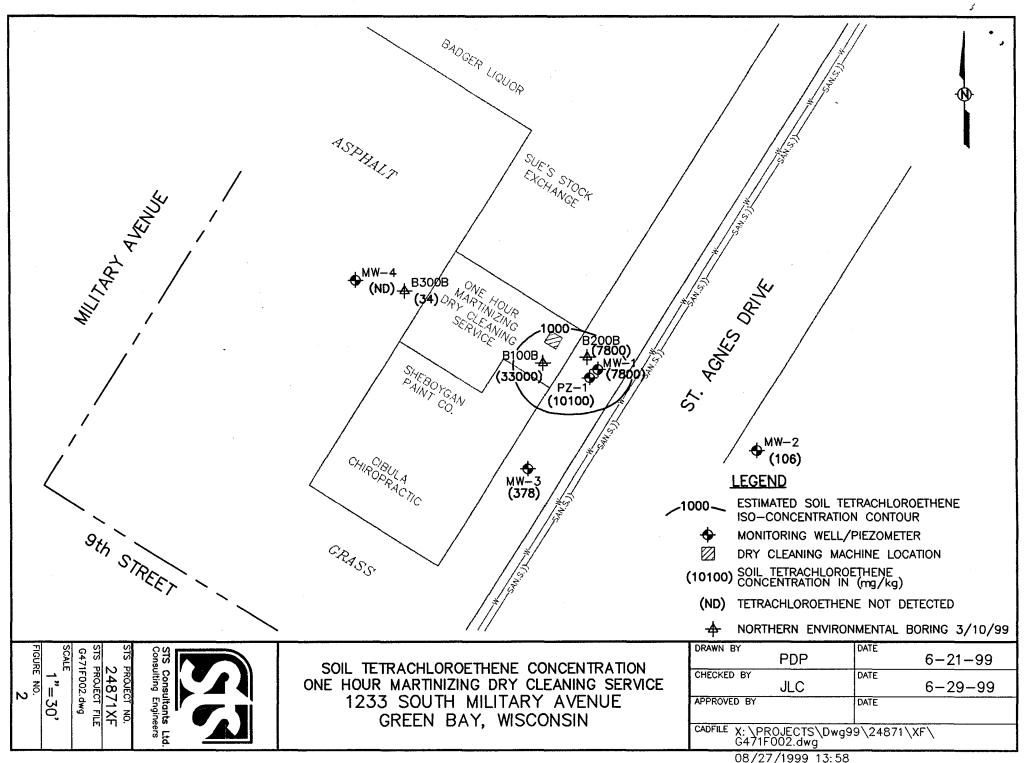
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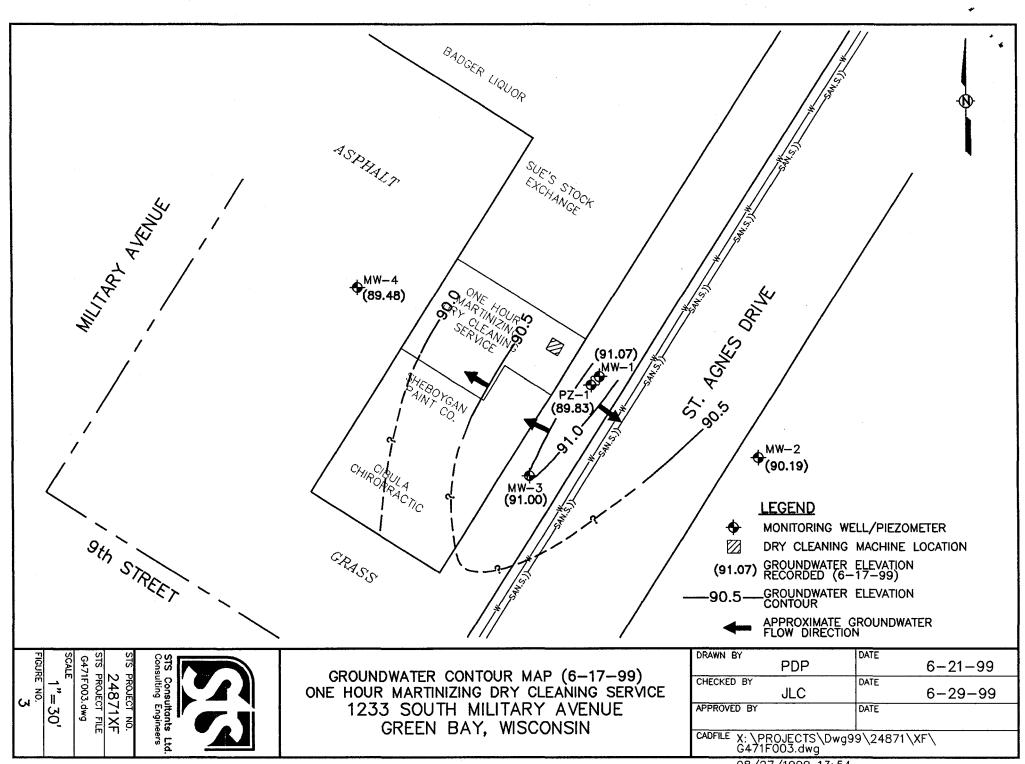
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403 South Jefferson Street Green Bay, Wisconsin 54301

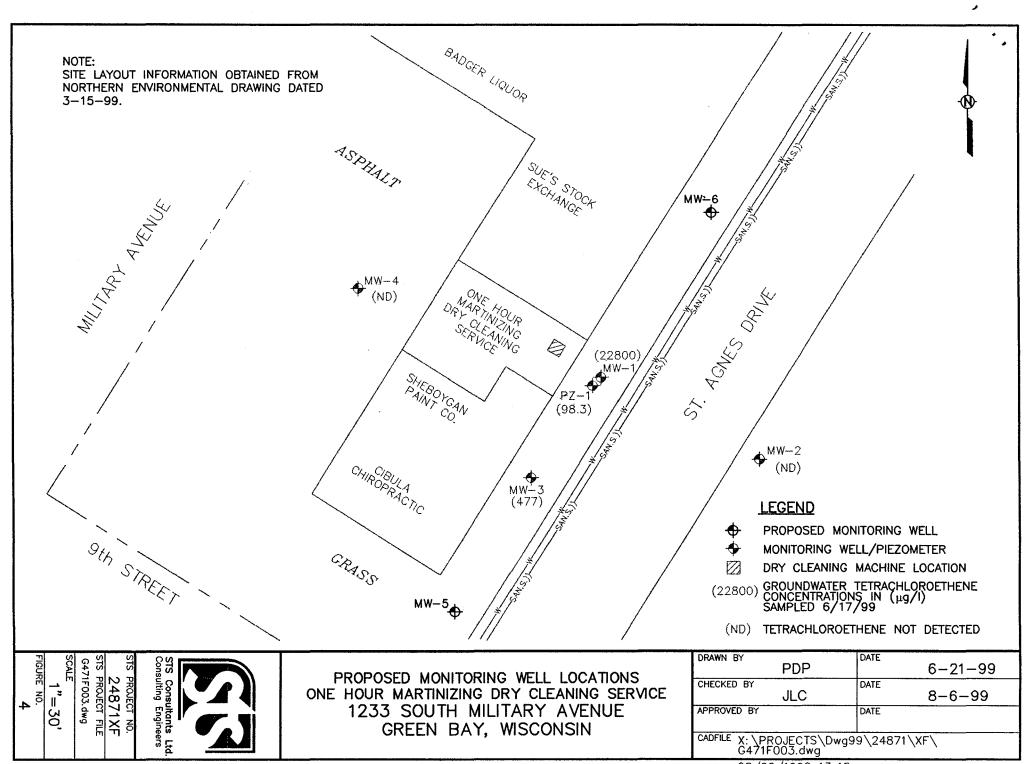


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Soil Analytical Results One Hour Martinizing 1233 S. Military Avenue Green Bay, Wisconsin

			Analyte Units	Benzene ug/kg	cis 1,2-Dichloroethene ug/kg	Ethylbenzene ug/kg	Methylene Chloride ug/kg	Naphthalene ug/kg	Tetrachloroethene ug/kg	Trichloroethene ug/kg	Toluene ug/kg	Trimethylbenzenes ug/kg	Xylenes ug/kg
			Depth-ft										
PZ-1	6/3/99	S-2	2.0 - 4.0	<116	<115	<120	<157	<50.7	10100	511	<68.0	<501	<352
		S-3	4.0 - 6.0	<11.4	21.2 (p)	<11.8	<15.4	<4.97	2760	134	<6.67	<49.1	<34.6
MW-2	6/3/99	S-3	4.0 - 6.0	<12.6	<12.5	<13.0	<17.1	<5.51	106	<14.2	<7.39	<54.5	<38.3
MW-3	6/3/99	S-2	2.0 - 4.0	<11.7	<11.6	<12.1	<15.8	<5.12	<21.0	<13.2	<6.86	<50.6	<35.6
		S-4	6.0 - 8.0	<12.9	<12.8	<13.3	<17.5	<5.64	378	<14.6	<7.56	<55.7	<39.1
MW-4	6/3/99	S-2	3.0 - 5.0	<11.7	<11.6	<12.1	<15.8	<5.11	<21.0	<13.2	<6.86	<50.5	<35.5
VAC NR	720 Generic	RCL <sup>1</sup>		5.5		2,900					1,500		4,100

Notes:

ug/kg = micrograms per kilogram

Soil Analytical Results from Northern Environmental's March 23, 1999, Phase 2 ESA.

		Analyte	Benzene	cis 1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Naphthalene	Tetrachloroethene	Trichloroethene	Toluene	Trimethylbenzenes	Xylenes
		Units	ug/kg	ug/kg	ug/kg	ug/kg_	ug/kg	ug/kg_	ug/kg	ug/kg	ug/kg	ug/kg
		Depth-ft										
S102B	3/10/99	1.0 - 3.0	<25	38	<25	<25	<25	33000	66	<25	<50	<75
S201B	3/10/99	1.0 - 3.0	<25	<25	<25	<25	<25	7800	88	<25	<50	<75
S301B	3/10/99	1.0 - 3.0	<25	<25	<25	<25	<25	34	<25	<25	<50	<75
720 Generi	c RCL <sup>1</sup>		5.5		2,900					1,500		4,100
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<sup>(</sup>p) = Reported result is less than the practical quantitation limit

<sup>&</sup>lt;sup>1</sup>Wisconsin Administrative Code Chapter NR 720 Generic Residual Contaminant Level

### **Groundwater Analytical Results** One Hour Martinizing 1223 S. Military Avenue Green Bay, Wisconsin

Analyte Units		Benzene ug/L	cis 1,2-Dichloroethene ug/L	Ethylbenzene ug/L	Methylene Chloride ug/L	Naphthalene ug/L	Tetrachloroethene ug/L	Trichloroethene ug/L	Toluene ug/L	1,1,1-Trichloroethane ug/L	Trimethylbenzenes ug/L	Xylenes ug/L
MW-1	6/17/99	<94	<93	<97	<127	<41	22800	233 (p)	<55	257 (p)	<405	<285
MW-2	6/17/99	<0.19	<0.19	<0.19	<0.25	<0.08	<0.34	<0.21	<0.11	<0.30	<0.81	<0.57
MW-3	6/17/99	<9.4	<9.3	<9.7	<12.7	<4.1	477	<10.6	<5.5	<15.1	<40.5	<28.5
MW-4	6/17/99	<0.19	<0.19	<0.19	<0.25	<0.08	<0.34	<0.21	0.47	<0.30	<0.81	<0.57
PZ-1	6/17/99	<0.94	<0.93	<0.97	<1.27	<0.41	98.3	4	<0.55	5.04	<4.05	<2.85
NR 140 Gr	oundwater Stand	ards			·					· · · · · · · · · · · · · · · · · · ·		
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PAL		0.5	7	140	0.5	8	0.5	0.5	68.6	40	96	124

Notes:

ug/L = micrograms per liter

(p) = Reported result is less than the practical quantitation limit

120 Wisconsin Administrative Code Chapter NR 140 Enforcement Standard (ES) Exceedance

1348 Wisconsin Administrative Code Chapter NR 140 Preventive Action Limit (PAL) Exceedance

State of Wisconsin
Department of Natural Resources

### SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

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### SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-97

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### SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-9

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### SOIL BORING LOG INFORMATION

Form 4400-122

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Boart Longyear - J. Flaminio - STS Project No. 24871XF 6/7/1999 6/7/1999 Hollow-stem Auger WI Unique Well No. DNR Well ID No. Common Well Name Final Static Water Level No. Feet MSL Surface Elevation MW-4 Feet MSL Surface Elevation MSL Borcholo Diameter Feet MSL Surface Elevation MSL Borcholo Diameter MW-4 Feet MSL Surface Elevation MSL Borcholo Diameter MSL Surface Elevation MSL Surface Elevation MSL Borcholo Diameter MSL Surface Elevation MSL Surface Elevation MSL Borcholo Diameter MSL Surface Elevation MSL Borcholo Diameter MSL Surface Elevation MSL Surface Elevation MSL Borcholo Diameter MSL Borcholo Diameter MSL Surface Elevation MSL Borcholo Diameter Diameter MSL Borcholo Diameter Diameter Diameter Diameter Diameter Diameter Diameter								Date D	rilling S	Started		ID:	ate Drill	ing Co	mnletec			ling Method
WI Unique Well No.  DNR Well ID No.  Gormon Well Name  MW-4  MW-4  Feet MSL  Soft	Dorm	БЪппес		mm nu	ne ana n		,			, tua 10 G					p.iotoc	-	1	-
Boring Location or Local Grid Origin   Check if estimated:   State Fine   State F								E: 10				10 6			1999			
Bering Location or Local Grid Cirigin   Check if estimated:	WI U	nique W	eli No	•	DNK	Well ID No.	1	rinai S			/ei	Suriac			ASL.	B		
Sample  Sample  Soil/Rock Description  And Geologic Origin For Each Major Unit  Soil/Rock Description  And Geologic Origin For Each Major Unit  Soil/Rock Description  Fill: 3 inches of asphalt Fill: Medium gravel - dark brown organic silty- topsoil - brown silty lay  1/1  1/1  End of Boring Boring advanced from 0.0 feet to 13.5 feet by bollow-stem augor Installed 2-inch diameter schedule 40 PVC monitoring well at 13.0 feet  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signatury  And Firm STS Consultants, Ltd.  Tel: 920-468-1978  Tre: 920-468-1978							if estimated: [])	<u> </u>			•	"				(If appl		11101100
Sample  Sample  Soil/Rock Description  And Geologic Origin For Each Major Unit  Soil/Rock Description  And Geologic Origin For Each Major Unit  Soil/Rock Description  Fill: 3 inches of asphalt Fill: Medium gravel - dark brown organic silty- topsoil - brown silty lay  1/1  1/1  End of Boring Boring advanced from 0.0 feet to 13.5 feet by bollow-stem augor Installed 2-inch diameter schedule 40 PVC monitoring well at 13.0 feet  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signatury  And Firm STS Consultants, Ltd.  Tel: 920-468-1978  Tre: 920-468-1978	State	Plane P.C.	2-9	Wes	sid	e-Fox Rive	S/C/N			•	<del></del>	"		Fac				
Sample    Soil/Rock Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Soil/Rock   Description   And Geologic Origin For   Each Major Unit   Description   And Geologic Origin For   Description   Description   And Geologic Origin For   Description   De	Facili	ty ID	01		/4 01 Se	County	1 N, K			Civil	Fown/C	ity/ or	Village	rcc		<u> </u>		reel 🔲 w
Soil/Rock Description And Geologic Origin For Each Major Unit    Part				_	,	Brown		5		Gree	n Bay	/	<del>.,</del>					
And Geologic Origin For Each Major Unit    Part   P	Saı	mple		1	<u> </u>	0.10	N.D. Caller			1			-	Soil	l Prop	erties	Γ	
Signatory   Amount of the content		t. &	nts	eet			=						<u>š</u> .					ro.
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See See See See See See See See See See		<u>12</u>		E						XXX	S B	3	1					
See See See See See See See See See See	S-1	$\frac{24}{6}$	6	F <sub>2</sub>				ity -				1/1						
SS N 24 5 5.0 at 5.0 feet  Blind Drill  End of Boring Boring advanced from 0.0 feet to 13.5 feet by hollow-stem auger Installed 2-inch diameter schedule 40 PVC monitoring well at 13.0 feet  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  Tel: 920-468-1978	SS / S-2	SS //   = 2.5   topson steventury stay						st to wet		<del>                                       </del>		1/1						
I hereby certify that the information on this form is true and correct to the best of my knowledge.    Signature   Amount   Amoun	SS 18 at 5.0 feet								ļ				1					
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I hereby certify that the information on this form is true and correct to the best of my knowledge.    Firm STS Consultants, Ltd.   Tel: 920-468-1978	L	1			1	_	0.0 feet to 13.5 feet b	v										
I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  Firm STS Consultants, Ltd.  Tel: 920-468-1978				-	hollov	w-stem auger		,										
I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  Firm STS Consultants, Ltd.  Tel: 920-468-1978										ĺ				-				
Signature STS Consultants, Ltd. Tel: 920-468-1978					mome	ornig wen at 15.	<i>3</i> 1001											<b>y</b>
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Signature STS Consultants, Ltd. Tel: 920-468-1978	I here	hy certif	v that	the info	rmation	on this form is tr	ue and correct to the h	est of my l	nowlea	l ige		<u>i</u>	I	L	I			
11143 K ONIOF LIFE LYCOTE LAND 18/11 - 1/2				0/2	2 /	M.	Firm ST	'S Consu	ltants	, Ltd.	W7 54	211		<u></u>				

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

### SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 5-9

			Ro	ute To:	Watershed/W Remediation/	astewater   Redevelopment	t 🗆	Waste Other	-	gement								
						•									Pa	ge 1	of	1
	y/Proje				o	•		License	/Permi	t/Monit	oring l	Number		Boring	g Numb	er		
					Cleaning Ser			Date Dr	illing S	Started		D	ate Drill	ling Co	mpletec	<u>PZ</u>		ling Method
	rt Lor 71XF		r - P. l	Dicksin	son - STS Pr	oject No.			6/4	/1999		:		6/4/1	999		Н	ollow-stem uger
	ique W			DNR V	Well ID No.	Common Wel		Final St	atic Wa	ater Lev		Surfa	ce Eleva	ition		В	orehole	Diameter
Boring	Locati	on or I	ocal G	id Origin	) (Check	PZ-1		<u> </u>	Feet	MSL				Feet N		(If appl		Inches
					e-Fox Riv			Lat.	 g	<u> </u>	<u> </u>	···			l t 🗆 S	1		☐ E Feet ☐ W
Facility	y ID			1	County		1	County C					Village					
San	nple		1		Brown			5		Gree	en Ba	ı <u>y</u> T	T	Soil	Prop	erties		1
					Soil/Re	ock Description	1			ĺ		İ			Пор	Crtics		1
. 9	Att. ¿ ed (i	ounts	n Fee		And Geo	ologic Origin F	or						ssive	ر و		<u>ج</u>		nts
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet		Eacl	n Major Unit			uscs	Graphic Log	Well	PID/FID	Compressive Strength	Moisture Content	Liquid	Plasticity Index	P 200	RQD/ Comments
S-1 SS	24 18	3	<u> </u>		rass - dark brow					XXX		<2/3						
S-2 \/	24 24	5	2.5	Fill: D	ark brown silty	ciay and brown	i iine siity	y sand				75/15	0					
ss 🛚		,	Ē	Tight h	orown to brown	cilty condy alou	, maiet t	to wet		ļ		10/25						
S-3 SS	24 18	4	-5.0	firm	orown to brown	siny sandy ciay	/ - moist t	io wei -				10/23						
S-4 SS	<u>24</u> 24	3	-7.5		silty clay - trace	gray mottling	- moist to	o wet -				17/25						
S-5	24 24	3	E 7.3	J								50/95						
ss X	24 <u>36</u>		10.0						CL									
HSA	50		E															
S-6 \/	24	2	12.5									40/95						
ss X	24 18	_	- 15.0	Brown	silty sandy clay	- wet - loose						1,510.2						
HSA	<u>36</u>		= 13.0															
			17.5						CL									
S-7 SS	<u>24</u> 24	5	E									5/13						
TIC V	<u>12</u>		20.0															
HSA S-8 SS	24 18 <u>6</u>	10	22.5		to dark brown s	silty clay - very	stiff - lac	custrine	CL		目	5/15						
HSA	ט			Boring hollow Installe	Boring advanced from -stem auger ed 2-inch diamet neter at 22.5 feet	er schedule 40				<i>(((((((((((((((((((((((((((((((((((((</i>		.						
I hereh	v certif	v that	the info	mation o	on this form is tr	ue and correct t	to the bes	t of mv k	nowled	 lge.	<u> </u>	<u></u>	<u></u>					
Signati	·				Yan	Firm		Consu				<del> </del>					Tel:	920-468-1978
	/-	af	· yv.		1000	,		Kepler D			WI 5	4311						920-468-3312

This form is authorized by Chapters 281, 283, 269, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Facility/Project Name	State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater ☐ Remediation/Redevelopment ☐	Waste Management ☐ Other ☐	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 6-97
Facility ID	Facility/Project Name	Local Grid Location of Well	· · · · · · · · · · · · · · · · · · ·	
Facility ID	One Hour Martinizing Dry Cleaning Service	n. □ S		MW-1
Facility   D	Facility License, Permit or Monitoring No.	Grid Origin Location		Wis. Unique Well No DNR Well Number
Section Location of WasteSource		Lat Lo	ng or	
Section   Location of WaterSource   Section   Location of WaterSource   Well Code   1 t/mw   P.   Cap   A   Powpardient   P.   Cap   A   Powpardient   P.   Cap   P	Facility ID	St. Plane ft. N, _	ft. E. S/C/N	Date Well Installed
Note   Note		Section Location of Waste/Source	e	06/04/1999
Distance Well S From WasteSource   Location of Well Relative to WasteSource   P. Dickmason	Type of Well	P.C. 2-9 West Side-	-Fox River DE	Well Installed By: (Person's Name and Firm
Distance Well Is From WaterSource fi. d   Department   No Known  A Protective pipe, top elevation  A Protective pipe, top elevation  B. Well casing, top elevation  96.0 ft. MSL  D. Surface seal, bottom  96.0 ft. MSL or  1.0 ft.    Surface seal, bottom  96.0 ft. MSL or  1.0 ft.   Surface seal, bottom  96.0 ft. MSL or  1.0 ft.   Surface seal, bottom  96.0 ft. MSL or  1.0 ft.   Surface seal, bottom  96.0 ft. MSL or  1.0 ft.   Well bottom  84.0 ft. MSL or  1.0 ft.   Surface seal, bottom  1.0 ft.   Material between well casing and protective pipe:  a. Inside diameter:  a. Material:  8.0 in.  8.1 lo. ft.   Additional protection?    Yes   No Other		Location of Well Relative to Was	te/Source	P. Dickinson
B. Well casing, top elevation	Roundary	u □ Upgradient s □ S	idegradient Iot Known	
B. Well casing, top elevation	A. Protective pipe, top elevation	ft. MSL	-1 /	
D. Surface seal, bottom 96.0 ft. MSL or 1.0 ft.    12. USCS classification of soil near screen:   GP   GM   GC   GW   SW   SP     SM   SC   ML   MHC   CL   Cl     Bedrock   I. Sieve analysis stratched?   Yes   No     14. Drilling method used: Rotary   5 0     Hollow Stem Auger   24 1     Hollow Stem Auger   24 0     Hollow Stem Auger	B. Well casing, top elevation9	6.63 ft. MSL		r: <u>8.0</u> in.
D. Surface seal, bottom 96.0 ft. MSL or 1.0 ft.    12. USCS classification of soil near screen:   GP   GM   GC   GW   SW   SP   SM   SC   ML   MHD   CL   CH   Bedrock   Sw   SP   SM   SC   ML   MHD   CL   CH   Bedrock   Sw   SW   SP   SW   SW   SW   SW   SW   SW	C. Land surface elevation	97.0 ft. MSL <	b. Length:	1.0 ft.
12. USCS classification of soil near screen:   GP   GM   GC   GW   SW   SP   SN   SP   SN   SN   SN   SN   SN		<b>\</b> \!\!\!	c. Material:	
SM	D. Surface seal, bottom ft. MSL	, or n.		
Second   Miles   Mil	12. USCS classification of soil near screen:	<u> </u>		
Bedrock   3. Surface seal:   Concrete   0   13. Sieve analysis attached?   Yes   20   14. Drilling method used:   Rotary   25 0   Hollow Stem Auger   23 4 1   Other   20   2   Air   Other   20   2   15. Drilling fluid used: Water   0 2   2   Air   0 1   Drilling Mul   0 3   None   20 9 9   16. Drilling additives used?   Yes   20 No   Describe   17. Source of water (attach analysis):   Describe   17. Source of water (attach analysis):   Sentonite seal;   Describe   18. Drilling additives used?   Yes   20 No   2.5   ft.   Sereen joint, top   94.5   ft. MSL or   2.5   ft.   Sereen joint, top   94.0   ft. MSL or   13.0   ft.   Sereen joint, top   94.0   ft. MSL or   13.5   ft.   Sereen joint, top   33.5   ft. MSL or   13.5   ft.   Sereen joint, top   2.37   in.   No. D. well casing   2.37   in.   No. D. well casing   2.37   in.   No. D. well casing   2.36   in.   Well bottom   Signature   2.37   in.   No. D. well casing   2.06   in.   Well bottom   Signature   2.06   in.   Fellow pack, but on this form is true and correct to the best of my knowledge.   Felim STS Consultants, Ltd.   Tel: 920-468-1978			If yes, describ	·
13. Sieve analysis attached?   Yes	· · ·	LO CHO	3 Surface seal:	
14. Drilling method used:   Rotary   5 0   Hollow Stem Auger   24 1   20/40 Badger   Other   2   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   20/40 Badger   Other   2   3 0   2   2   2   2   2   2   2   2   2		- FINE	₩ \	
Hollow Stem Auger	•		XXI \	
15. Drilling fluid used: Water   0 2   Air   0 1   0			★ 4. Material between	
15. Drilling fluid used: Water   0 2   Air   0 1   Drilling Mud   0 3   None   Ø 9 9	Hollow Stem Auge	r ⊠41	20	0/40 Badger Other 57
15. Drilling fluid used: Water   0 2	Othe		<b>X</b>	
Drilling Mud	15 Drilling fluid used: Water	ir 🗆 0 1	XXI -	
16. Drilling additives used?   Yes   Signature   Sig				
1. Drilling additives used?       Yes				
Describe   17. Source of water (attach analysis):   Tremie   0 1   Tremie pumped   0 2   Gravity   0 8	16. Drilling additives used? ☐ Yes	⊠ No		
17. Source of water (attach analysis):   Gravity Ø 0 8		´ 🔘 [		
17. Source of water (attach analysis):   17. Source of water (attach analysis):   18. Bentonite seal, top   96.0   ft. MSL or   1.0   ft.     19. Co.   Other   □ □     19. Fine sand, top   94.5   ft. MSL or   2.5   ft.     19. Well casing   2.37   in.     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. Soreen material: Manufacturer, product name and mesh size     10. S				Tremie pumped □ 02
E. Bentonite seal, top 96.0 ft. MSL or 1.0 ft.    Second File   Second F	17. Source of water (attach analysis):			
E. Bentonite seal, top 96.0 ft. MSL or 1.0 ft.  7. Fine sand, top 94.5 ft. MSL or 2.5 ft.  G. Filter pack, top 94.5 ft. MSL or 2.5 ft.  H. Screen joint, top 94.0 ft. MSL or 3.0 ft.  I. Well bottom 84.0 ft. MSL or 13.0 ft.  J. Filter pack, bottom 83.5 ft. MSL or 13.5 ft.  L. Borehole, bottom 83.5 ft. MSL or 13.5 ft.  L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.  I. Hereby certify that the information on this form is true and correct to the best of my knowledge.  Firm STS Consultants, Ltd.  7. Fine sand material: Manufacturer, product name and mesh siz a.  20/40 Badger  b. Volume added 6.7  7. Fine sand material: Manufacturer, product name and mesh siz a.  20/40 Badger  b. Volume added 7.3  9. Well casing: Flush threaded PVC schedule 80 2 4  1. Filter pack, bottom 83.5 ft. MSL or 13.5 ft.  10. Screen material: PVC  a. Screen Type: Factory cut 11  Continuous slot 0 1  Other 1.  11. Backfill material (below filter pack): None 14  N. 1.D. well casing 2.37 in.  Thereby certify that the information on this form is true and correct to the best of my knowledge.  Firm STS Consultants, Ltd.  Tel: 920-468-1978			6. Bentonite seal:	a. Bentonite granules   3 3
F. Fine sand, top  94.5 ft. MSL or  94.5 ft. MSL or  94.5 ft. MSL or  94.5 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  94.6 ft. MSL or  95. Well casing:  Flush threaded PVC schedule 40 2 2 3 Flush threaded PVC schedule 40 2 2 4 Flush threaded PVC schedule 80 2 4 Flush threaded PVC			b. □1/4 in. ⊠:	
F. Fine sand, top  94.5 ft. MSL or  2.5 ft.  B. Filter pack, top  94.0 ft. MSL or  3.0 ft.  9. Well casing:  Flush threaded PVC schedule 40 2 3  Flush threaded PVC schedule 80 2 4  Other  Other  Continuous slot 0 1  Description of the schedule slot of the sched	E. Bentonite seal, top 96.0 ft. MSL	or1.0 ft. \	<b>α</b> /	
B. Volume added			7. Fine sand materi	al: Manufacturer, product name and mesh size
H. Screen joint, top 94.0 ft. MSL or 3.0 ft.    Solution   Streen joint, top   94.0 ft. MSL or   13.0 ft.	F. Fine sand, top 94.5 ft. MSL	or2.5 ft.	a	
H. Screen joint, top 94.0 ft. MSL or 3.0 ft.    Solution   Streen joint, top   94.0 ft. MSL or   13.0 ft.	045 0 167	25 6	b. Volume added	
H. Screen joint, top 94.0 ft. MSL or 3.0 ft.    Solution   Streen joint, top   94.0 ft. MSL or   13.0 ft.	G. Filter pack, top ft. MSL	or n.		=
I. Well bottom    84.0   ft. MSL or   13.0   ft.     J. Filter pack, bottom   83.5   ft. MSL or   13.5   ft.     L. Borehole, diameter   8.0   in.     M. O.D. well casing   2.37   in.     I. Backfill material (below filter pack):     None   2.06   in.     Streen material:   PVC       a. Screen Type:   Factory cut   11     Continuous slot   0   1     Other   2     Continuous slot   0   1     Other   2     Continuous slot   0     Other   2     D. Manufacturer   Boart Longyear     C. Slot size:   0.010     d. Slotted length:   10.0   ft.     Streen Type:   Factory cut   11     D. Manufacturer   Boart Longyear     C. Slot size:   0.010      U Saraan joint tan 940 A MSI		•••1		
I. Well bottom 84.0 ft. MSL or 13.0 ft.  J. Filter pack, bottom 83.5 ft. MSL or 13.5 ft.  K. Borehole, bottom 83.5 ft. MSL or 13.5 ft.  L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.  I. Backfill material (below filter pack):  None 14.  I. Bereby certify that the information on this form is true and correct to the best of my knowledge.  Flush threaded PVC schedule 80 2 4  Other 2.4  I. Screen material: PVC  a. Screen Type: Factory cut 11  Continuous slot 0 1  Other 2.1  I. Board Longyear  c. Slot size: 0.010 in.  I. Backfill material (below filter pack): None 14  Other 1.1  I. Backfill material (below filter pack): None 14  Other 1.1  I. Backfill material (below filter pack): Tel: 920-468-1978	H. Screen joint, top It. MSL	<del></del>	93 /	
K. Borehole, bottom 83.5 ft. MSL or 13.5 ft.  L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.    M. I.D. well casing 2.06 in.   Signature   Dother   Eliment   Elim	I Well hottom 84.0 a MSI	or 13.0 e .	9. Well casing.	
K. Borehole, bottom 83.5 ft. MSL or 13.5 ft.  L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.    M. I.D. well casing 2.06 in.   Signature   Dother   Eliment   Elim	i. Well bottom	"—— "·		327473
K. Borehole, bottom 83.5 ft. MSL or 13.5 ft.  L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.    M. I.D. well casing 2.06 in.   Signature   Dother   Eliment   Elim	I Filter pack hottom 83.5 ft MSI.	or 13.5 ft	10 Screen material:	
K. Borehole, bottom 83.5 ft. MSL or 13.5 ft.  L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.  N. I.D. well casing 2.06 in.    Continuous slot □ 01	The pack, cottom	VIIII	-84	
L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.  M. I.D. well casing 2.06 in.    Description of the content of the pack   Description of the pack   Description o	K. Borehole, bottom 83.5 ft. MSL	or 13.5 ft.	5516611 19,761	
L. Borehole, diameter 8.0 in.  M. O.D. well casing 2.37 in.  M. I.D. well casing 2.06 in.    Ihereby certify that the information on this form is true and correct to the best of my knowledge.    Firm STS Consultants, Ltd.   Soart Longyear   0.010 in.     C. Slot size: 0.010 in.   10.0 ft.     10.0 ft.   11. Backfill material (below filter pack): None 1 4     Other   Image: 1.00 ft.   14     Other   Image: 1.00 ft.   15     Other   Image: 1.00 ft.   16     Other   Image: 1.00 ft.   17     Interest to the best of my knowledge.   It is provided to the best of my knowled				
M. O.D. well casing 2.37 in.  C. Slot size:  d. Slotted length:  11. Backfill material (below filter pack):  None ≥ 14  N. I.D. well casing 2.06 in.   Thereby certify that the information on this form is true and correct to the best of my knowledge.  Firm STS Consultants, Ltd.  Tel: 920-468-1978	L. Borehole, diameter 8.0 in.		b. Manufacturer	· ·
M. O.D. well casing 2.37 in.  d. Slotted length: 10.0 ft.  None ≥ 14  N. I.D. well casing 2.06 in.  I hereby certify that the information on this form is true and correct to the best of my knowledge.    Firm STS Consultants, Ltd.   Tel: 920-468-1978			•	
N. I.D. well casing 2.06 in.  11. Backfill material (below filter pack): None ≥ 14 Other □ □  I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature   Other □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	M. O.D. well casing 2.37 in.		`	: <u>10.0</u> ft.
I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  STS Consultants, Ltd.  Tel: 920-468-1978	<u> </u>		11. Backfill material	
I hereby certify that the information on this form is true and correct to the best of my knowledge.  Signature  STS Consultants, Ltd.  Tel: 920-468-1978	N. I.D. well casing 2.06 in.			Other 🗆 🕮
Signature STS Consultants, Ltd. Tel: 920-468-1978				
515 Consultants, Etc. 1ci. 920-408-1978		orm is true and correct to the best	of my knowledge.	
	Signature OM M	3 1 3 Collisu		

Please complete both Forms 4400-113A and 4400-1/3B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCTION
Route 10.	Remediation/Redevelopment	Other	Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well	a r	Well Name
One Hour Martinizing Dry Cleaning Service	ft. □ N.	ft. 🖯 🛱.	MW-2 Wis. Unique Well No DNR Well Number
Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated:  )	Wis. Unique Well No DNR Well Number
	Lat Lor	ng or	
Facility ID	St. Plane ft. N, _	ft. E. S/C/N	Date Well Installed
	Section Location of Waste/Source	<u> </u>	06/04/1999
Type of Well	P.C. 2-9 West Side 1/4 of 1/4 of Sec	T N. R 🗆 W	Well Installed By: (Person's Name and Firm
Well Code 11/mw Distance Well Is From Waste/Source	Location of Well Relative to Was	te/Source	P. Dickinson
Boundary ft.		idegradient lot Known	Boart Longyear
A. Protective pipe, top elevation	<u></u>	1. Cap and lock?	⊠ Yes □ No
B. Well casing, top elevation9	6.60 ft. MSL	2. Protective cover a. Inside diamete	• •
<u>.</u>	96.8 ft. MSL <	b. Length:	1 in 1.0_ ft.
k.		c. Material:	Steel 🖾 0 4
D. Surface seal, bottom95.8 ft. MSL	or <u>1.0</u> ft.	× 1201212	Other 🗆 🕮
12. USCS classification of soil near screen:		d. Additional pro	tection? ☐ Yes ☒ No
GP GM GC GW SV	WO SPO		3·
	Г□ СН□   ₩	3. Surface seal:	Bentonite   30
Bedrock□		3. Surface sear:	Concrete 🛛 0 1
13. Sieve analysis attached? ☐ Yes	⊠ No	<b>\</b>	Other 🗆 🚟
14. Drilling method used: Rotar		34. Material between	well casing and protective pipe:
Hollow Stem Auge		20	Bentonite
Othe		<b>X</b>	
15. Drilling fluid used: Water □ 0 2 A	ir □01	XXI -	al: a. Granular Bentonite [] 3 3
Drilling Mud 03 Non			nud weight. Bentonite-sand slurry   3 5 nud weight Bentonite slurry   3 1
			nite Bentonite-cement grout   50
16. Drilling additives used? ☐ Yes	⊠ No		volume added for any of the above
		f. How installed	
Describe			Tremie pumped □ 02
17. Source of water (attach analysis):			Gravity ⊠ 08
		6. Bentonite seal:	
			3/8 in. □ 1/2 in. Bentonite pellets □ 3 2
E. Bentonite seal, top95.8 ft. MSL	or ft. \	×4 /	Other   Solution  Other    Other   Solution
F. Fine sand, top 94.3 ft. MSL	or2.5 ft.	፟ / / 。	ar. Manufacturer, product hame and mesh size
1. The said, top 1t. Wist	or r.	b. Volume added 8. Filter pack mater	ft³
G. Filter pack, top 94.3 ft. MSL	or2.5 ft.	8. Filter pack mater	ial: Manufacturer, product name and mesh size
N. C	or3.0 ft.	a	20/40 Badger 93
H. Screen joint, top 93.8 ft. MSL	or	b. Volume added 9. Well casing:	Flush threaded PVC schedule $40 \boxtimes 23$
I. Well bottom 83.8 ft. MSL	or13.0 ft. \	9. Well casing.	Flush threaded PVC schedule 80 \( \sigma 2 4
i. Well bottom	" — " <u> </u>	<u></u>	Other
J. Filter pack, bottom83.3 ft. MSL	or13.0 ft.	10. Screen material:	
•		a. Screen Type:	Factory cut 🗵 11
K. Borehole, bottom83.3 ft. MSL	or13.5 ft.		Continuous slot   0 1
0.0			Other Department
L. Borehole, diameter8.0 in.	VIIIIII	b. Manufacturer	
M O.D 11	•	c. Slot size: d. Slotted length	0.010 in. 10.0 ft.
M. O.D. well casing $\frac{2.37}{}$ in.		11. Backfill material	
N. I.D. well casing 2.06 in.			Other D
III.			
I hereby certify that the information on this f	form is true and correct to the best	of my knowledge.	
Signature 1	Firm STS Consu		Tel: 920-468-1978
tallt. /a		or. Green Bay, WI 54311	Fax: 920-468-3312

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent

State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCTION
<u></u>	Remediation/Redevelopment	Other	Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well	ПЕ	Well Name
One Hour Martinizing Dry Cleaning Service		R. 🗒 W.	MW-3
Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated: [ ]	Wis. Unique Well No DNR Well Number
Facility ID	Lat Lat Lat.	ong or	Date Well Installed
Facility ID	St. Plane ft. N,	ft. E. S/C/N	
Type of Well	Section Location of Waste/Source	Eov Bivor OF	06/07/1999 Well Installed By: (Person's Name and Firm
••	P.C. 2-9 West Side 1/4 of 1/4 of Sec	, TN, R 🗆 W	
Well Code 11/mw Distance Well Is From Waste/Source	Location of Well Relative to Wa		J. Flaminio
Boundary ft.	d Downgradient n D	Sidegradient Not Known	Boart Longyear
A. Protective pipe, top elevation 9		1. Cap and lock?	⊠ Yes □ No
B. Well casing, top elevation9	06.96 ft. MSL	2. Protective cover a. Inside diamete	- ·
<b>o</b> , .	97.3 ft. MSL	a. Inside diamete b. Length:	r: in in 1.0 ft.
		c. Material:	Steel 🖾 0 4
D. Surface seal, bottom96.3 ft. MSI	or <u>1.0</u> ft.	N. M. C. C. C. C. C. C. C. C. C. C. C. C. C.	Other 🗆 💆
12. USCS classification of soil near screen:	2/2/2/2	d. Additional pro	otection?
	W O SP O	If yes, describe	e:
SM SC ML MH C	L CH CH CH CH	3. Surface seal:	Bentonite   30
_		S. Surface scar.	Concrete 🖾 0 1
13. Sieve analysis attached? ☐ Yes	⊠ No	3. Surface seal:  4. Material between  4. Material between  5. Annular space se bLbs/gal n cLbs/gal n d% Benton eFt³ f. How installed  6. Bentonite seal: b. □ 1/4 in. ☑ 3 c  7. Fine sand materia	Other 🗆 🔝
14. Drilling method used: Rotar	y □ 5 0	4. Material between	well casing and protective pipe:
Hollow Stem Auge	er 🛛 4 I	20	Bentonite ☐ 3 0  0/40 Badger Other ☑ □
Out		5 4	
15. Drilling fluid used: Water □ 0 2 A	ir □01	b I be/gal n	al: a. Granular Bentonite   3 3  and weight . Bentonite-sand slurry   3 5
Drilling Mud □ 0 3 Non	ie ⊠99	c. Lbs/gal n	and weight Bentonite slurry $\square$ 3 1
		d% Benton	nite Bentonite-cement grout $\Box$ 50
16. Drilling additives used? ☐ Yes	⊠ No	eFt³	volume added for any of the above
Describe		f. How installed	
17. Source of water (attach analysis):			Tremie pumped   0 2
17. Scarce of water (unach analysis).	1 🕷		Gravity ⊠ 08
		6. Bentonite seal:	a. Bentonite granules   3 3
E. Bentonite seal, top 96.3 ft. MSL	10 A	D. □ 1/4 in. ⊠.	3/8 in. □ 1/2 in. Bentonite pellets ⊠ 3 2  Other □ □
E. Bentonite seal, top n. MSL	or 1t.	7. Fine sand materia	al: Manufacturer, product name and mesh siz
F. Fine sand, top 94.8 ft. MSL			7.73
	or ft.	b. Volume added	ft <sup>3</sup>
G. Filter pack, top 94.8 ft, MSL	or2.5 ft.		ial: Manufacturer, product name and mesh si
		a	20/40 Badger
H. Screen joint, top 94.3 ft. MSL	or3.0 ft.	b. Volume added	ft³
04.2	12.0	9. Well casing:	Flush threaded PVC schedule 40 🗵 23
I. Well bottom 84.3 ft. MSL	or13.0_ ft		Flush threaded PVC schedule 80  24
22 9 0 2607	13.5 0		PVC Other
J. Filter pack, bottom 83.8 ft. MSL	or13.5 n.	10. Screen material:	··· ·· ·· · · · · · · · · · · · · · ·
K. Borehole, bottom 83.8 ft. MSL	or13.5 ft.	a. Screen Type:	Factory cut ⊠ 1 1 Continuous slot □ 0 1
K. Borchote, bottom			Other
L. Borehole, diameter 8.0 in.		b. Manufacturer	
	÷	c. Slot size:	<u>0.006</u> in.
M. O.D. well casing 2.37 in.		d. Slotted length	
		11. Backfill material	
N. I.D. well casing <u>2.06</u> in.		——————————————————————————————————————	Other 🗆 🔐
I hereby certify that the information on this			
Signature ) All		ultants, Ltd.	Tel: 920-468-1978
yar / 1/2 Jan	1035 Kepler	Dr. Green Bay, WI 54311	Fax: 920-468-3312

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent

State of Wisconsin Department of Natural Resources Route To:	*** . * ***	$\square$	***		. —	MONITORING WEI	I CONST	DUCTION
Route 1o:		Vastewater □ /Redevelopmen		aste Manago ther		Form 4400-113A		
Facility/Project Name	Local Grid Lo	ocation of Wel	1		-	Well Name		
One Hour Martinizing Dry Cleaning Service		_ft.		ft. 📙	E. W.	MV MV	W-4	
Facility License, Permit or Monitoring No.	Grid Origin L	Location		(Check if e	estimated: []	Wis. Unique Well No	DNR Well	Number
	Lat		Long		<u>'</u> or	D . W. 11 X	<u> </u>	
Facility ID	St. Plane	ft.	N,	f	t.E. S/C/N	Date Well Installed		
Type of Well		tion of Waste/S		Diron	ΠЕ	Well Installed By: (P	7/1999 'erson's Nam	e and Firm
Well Code 11/mw	1/4 of	-9 West S	ec	r. <u>Kive</u> N,	R 🗆 W			c and i iii
Distance Well Is From Waste/Source	Location of V u Upgra	Vell Relative to	o Waste/Sou □ Sidegra	urce adient		J. Fla	minio	<del></del>
Boundary ft.		gradient n	_			Boart L	ongyear	
A. Protective pipe, top elevation 9		, ———		1. C	ap and lock?		⊠ Ye	s 🗆 No
B. Well casing, top elevation9	6.32 ft. MSL				rotective cover	• •		8.0 in.
<b>.</b>	96.6 ft. MSL				. Inside diameter . Length:	Γ.	<del>-</del>	1.0 ft.
					. Material:		Steel	⊠ 04
D. Surface seal, bottom95.6 ft. MSL	or f			Aર્જારાજ્યા જિલ્લા				. WASTER
12. USCS classification of soil near screen:				Carrair q	. Additional pro			s⊠ No
	V SP C				If yes, describe	<u> </u>		
SM SC ML MH CI	L CH		▩ ▩ `	\ \3. s	urface seal:		Bentonite	
13. Sieve analysis attached? ☐ Yes	⊠ No						ConcreteOther	
14. Drilling method used: Rotar				4 N	faterial between	well casing and protect		
Hollow Stem Auge				** 2			Bentonite	□ 30
Othe				-	20	0/40 Badger	Other	
			₩—	5. A	nnular space sea	al: a. Granula	ar Bentonite	□ 33
	ir □01					nud weight . Bentonite		
Drilling Mud □ 0 3 Non	e 🖾 9 9	1				nud weight Beni		
16. Drilling additives used? ☐ Yes	⊠ No					nite Bentonite-c volume added for any		
					How installed			
Describe	<del></del>						nie pumped	
17. Source of water (attach analysis):							Gravity	⊠ 08
M				,	entonite seal:		ite granules	
056	1.0	_				3/8 in. □ 1/2 in. Bente		
E. Bentonite seal, top95.6 ft. MSL	or1.0	ft.				al: Manufacturer, prod		
F. Fine sand, top 94.1 ft. MSL	or2.5	A. \	▩ ▩ /	/ / "."	me sand materie	ii. Wandactarer, prod	uct name an	d mesh siz
T. Time Suite, top	VI	" \ \		/ b.	Volume added	ft	3	
G. Filter pack, top 94.1 ft. MSL	or2.5	ft.	3 8/	,		ial: Manufacturer, pro-	duct name a	nd mesh si
				/ a.		20/40 Badger		
H. Screen joint, top 93.6 ft. MSL	or3.0	ft.			Volume added			
1 W-11 h-m 83.6 A MOT	13.0			9. W	Vell casing:	Flush threaded PVC:		
I. Well bottom <u>83.6</u> ft. MSL	or	п.				Flush threaded PVC	Schedule 80  Other	79000 848
J. Filter pack, bottom83.1 ft. MSL	or 13.5	ft.			creen material:	PVC	Other	
in Med	VI	\	777777		Screen Type:		Factory cut	 ⊠ 11
K. Borehole, bottom83.1 ft. MSL	or <u>13.5</u>	ft. <			,		tinuous slot	
				-			Other	
L. Borehole, diameter8.0 in.		.7			. Manufacturer	Boart Longyea		0.006
227			\	\	Slot size:		-	0.006 in. 10.0 ft.
M. O.D. well casing $\frac{2.37}{}$ in.				`	Slotted length:	: (below filter pack):	None	
N. I.D. well casing 2.06 in.				11. D	wanin material			
				_				<del></del>
I hereby certify that the information on this f	orm is true an	d correct to the	e best of my	knowledge	е			
Signature Own M		т.	onsultants				Tel: 920-	468-1978
tall H. Lan	7		epler Dr. Gre	•	54311		Fax: 920-	

Please complete both Forms 4400-113A and 4400 113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater ☐ Remediation/Redevelopment ☐	Waste Management  Other	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well		Well Name
One Hour Martinizing Dry Cleaning Service	ft. S	——ft. □ £.	PZ-1
Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated:	Wis. Unique Well No DNR Well Number
	Lat Lor	ng or	·
Facility ID	St. Plane ft. N,	ft. E. S/C/N	Date Well Installed
	Section Location of Waste/Source	<b>x</b>	06/04/1000
Type of Well	P.C. 2-9 West Side 1/4 of 1/4 of Sec	-Fox River □E	Well Installed By: (Person's Name and Firm
Well Code 12/pz	Location of Well Relative to Wast	te/Source	P. Dickinson
Distance Well Is From Waste/Source Boundary ft.	u □ Upgradient s □ S d □ Downgradient n □ N	idegradient lot Known	Boart Longyear
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock?	⊠ Yes □ No
P. Wall casing tan elevation	06.55 ft. MSL	2. Protective cover	
•	11 1	a. Inside diamet	er: <u>8.0</u> in. 1.0 ft.
C. Land surface elevation	96.9 ft. MSL	b. Length:	
D. Surface seal, bottom95.9 ft. MSI	or 1.0 ft	c. Material:	Steel ⊠ 0.4
	62216.0216.03	d. Additional pr	Other □ 💆 otection? □ Yes 🗵 No
12. USCS classification of soil near screen:			otection? — res 🗵 No
GP GM GC GW S' SM SC ML MH C	WO SPO		Bentonite 3 0
Bedrock□		3. Surface seal:	Concrete 🖾 0 1
13. Sieve analysis attached? ☐ Yes	⊠No		Other []
14. Drilling method used: Rotar	1 1881 18	4 Material betwee	n well casing and protective pipe:
Hollow Stem Auge		***************************************	Bentonite   3 0
Othe		2	20/40 Badger Other 🖂 💆
		5 Annular space s	eal: a. Granular Bentonite ⊠ 3 3
15. Drilling fluid used: Water □ 0 2 A	ir □01 🕌 🥻		mud weight. Bentonite-sand slurry   35
Drilling Mud □ 0 3 Nor	ıe ⊠99   👹 🦹		mud weight Bentonite slurry   3 1
16 7 77 177 19 17 17			onite Bentonite-cement grout
16. Drilling additives used? ☐ Yes	⊠No		3 volume added for any of the above
Describe		f. How installe	
17. Source of water (attach analysis):			Tremie pumped   0 2
(unadi unad)			Gravity ⊠ 08
		6. Bentonite seal:	
D.D	10 0	X1 /	3/8 in. □ 1/2 in. Bentonite pellets ⊠ 3 2  Other □
E. Bentonite seal, top95.9 ft. MSL	or n.	× /	ial: Manufacturer, product name and mesh siz
F. Fine sand, top 77.4 ft. MSL	or <u>19.5</u> ft.	ቘ / / 。	
77.4 0 x 67.	10.5 0	b. Volume adde 8. Filter pack mate	
G. Filter pack, top 77.4 ft. MSL	or19.5 ft.	a.	rial: Manufacturer, product name and mesh si 20/40 Badger
H. Screen joint, top 76.4 ft. MSL	or <u>20.5</u> ft.	b. Volume adde	2
		9. Well casing:	Flush threaded PVC schedule 40 🛛 2 3
I. Well bottom 74.4 ft. MSL	or22.5 ft. <	1	Flush threaded PVC schedule 80   24
		<del></del>	Other 🗆 🎉
J. Filter pack, bottom72.9 ft. MSL	or24.0 ft.	10. Screen material:	PVC
0		a. Screen Type:	<del>-</del>
K. Borehole, bottom 72.9 ft. MSL	orft.		Continuous slot   0 1
			Doort Vanguage
L. Borehole, diameter in.	<i>~~</i>	b. Manufacture	
2.00		c. Slot size:	0.010 in. h: 2.0 ft.
M. O.D. well casing $\frac{2.37}{}$ in.		d. Slotted lengt	
N. I.D. well casing 2.06 in.		11. Баский пацепа	l (below filter pack): None ≥ 14  Other □ ≥ 2
N. I.D. well casing $\frac{2.06}{}$ in.		-	Onici 🗆 🚈
I hereby certify that the information on this	form is true and correct to the boot	of my knowledge	
Signature Signature			m 1 000 110 111
- DA	Firm STS Consu	nants, Lta.	Tel: 920-468-1978

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

## MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

Route To: Watershed				ste Management L	ال		
	on/Redeve	lopment 🗆	Oth	ner 🗌	1117 11 3		
Facility/Project Name		County	_		Well 1		ET 7 1
One Hour Martinizing Dry Cleaning S	Service			own	ــــــــــــــــــــــــــــــــــــــ		W-1
Facility License, Permit or Monitoring Number		County Code	WI	s. Unique Well Nur	mber	DNR Well	Number
		5			,	<u></u>	
1. Can this well be purged dry?	⊠ Ye	s 🗆 No			Before	e Development	After Development
a. car and wear or purgent my.			11.	Depth to Water			
2. Well development method:				(from top of	a.	9.92 ft.	12.80 ft.
surged with bailer and bailed	⊠ 4	1		well casing)			
surged with bailer and pumped		5 1					
surged with block and bailed	□ 4	2		Date	b.	06/04/1999	06/04/1999
surged with block and pumped		2					
surged with block, bailed, and pumped		70					
compressed air		2.0		Time	c.	03:40 pm	04:00 pm
bailed only		. 0					
pumped only		5 1	12.	Sediment in well		0.0 inches	0.0 inches
pumped slowly		0		bottom			
other	_ 🗆 🛚		13.	Water clarity	Clear	⊠ 10	Clear ⊠ 20
					Turbid	15	Turbid 2 5
3. Time spent developing well		20 min.			(Descri	be)	(Describe)
					Low	turb - purges	Purges dry - low
4. Depth of well (from top of well casing)		12.8 ft.			dry a	after 1 gal -	turb - light brown
					light	brown	
5. Inside diameter of well	2	2.06 in.					
6. Volume of water in filter pack and well							
casing		2.6 gal.					
			Fill	in if drilling fluids	were use	d and well is at soli	d waste facility:
7. Volume of water removed from well		3.0 gal.					
			14.	Total suspended		mg/l	mg/l
8. Volume of water added (if any)		gal.	İ	solids			
			15	COD		ma/l	
9. Source of water added			13.	СОБ		mg/l	mg/l
			16	Well developed by:	. Parconia	Name and Firm	
10. Analysis performed on water added?	☐ Ye	s ⊠ No	10.	•		Name and Firm	
(If yes, attach results)		3 2		Jerry Pu	ıetz		
,				STS Co	nsultant	s Ltd.	
17. Additional comments on development:							
Purged and surged with 3' HDPE bai	ler - pur	ged dry multi	iple t	imes			
2 2	•	,	-				
Facility Address or Owner/Responsible Party Address	ress		1	1			
				ereby certify that the owledge.	e above ir	normation is true at	nd correct to the best of my
Name:			NII.	wiedge.			
O 77 34 311 9 9		• -		1	20-	en M	
Firm: One Hour Martinizing Dry Cle	aning S	ervice	Sig	nature:		74- SC	
1022 1 5111 4				$10^{\circ}$	i 	m (-	2
Street: 1233 Military Avenue			Pri	nt Name:	·UL	100 DAI	WE]
City/State/Zip: Green Bay, Wisconsin			ļ	STS C	Consulta	nts, Ltd.	
City/State/Zip: Green Bay, Wisconsin			Fin	m: <u>313 C</u>	vomanna	ino, Liu.	

# MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

Facility/Project Name One Hour Martinizing Dry Cleaning Service  Brown  MW-2  Facility License, Permit or Monitoring Number  County Code 5  Wis. Unique Well Number  DNR Well Number  DNR Well Number  1. Can this well be purged dry?  2. Well development method: surged with bailer and bailed surged with block and pumped surged with block and pumped surged with block and pumped compressed air bailed only  County Code Brown  MW-2  Polity License, Permit or Monitoring Number  NW-2  Well Name  MW-2  Before Development After Devel  11. Depth to Water (from top of well casing)  a. 8.26 ft.  Date b. 06/04/1999 06/04/  Time c. 03:15 pm 03:3				]	agement _	Waste Mana			rshed/Waste		
Second Hour Martinizing Dry Cleaning Service   Brown   MW-2				Well Nam		Other 🗆			ediation/Red		Facility/Project Name
County Code   S   Wis Unique Well Number   DNR Well Casing   DNR Well Number   DNR Well Number   DNR Well Number   DNR Well Number   DNR Well Number   DNR Well Number   DNR Well Number   DNR Well Number   DNR Well Number   DNR Well Casing   DNR		X7 2		VV CII I VAIII		Decision	Journy		ina Cami		• •
1. Can this well be purged dry?				nher	e Well Nur		ounty Code	Col	ing Servic	timizing Dry Cleanin	Facility License Permit
2. Well development method: surged with bailer and bailed surged with block and bailed surged with block and pumped surged with surged by surged with block and pumped surged with block and p			Brak won			Wis. Omqu	-			mt of Wiomtoring (Various	
2. Well development method: surged with bailer and bailed surged with bailer and pumped   6 1 surged with bailer and pumped   6 1 surged with bailer and pumped   6 2 surged with block and pumped   6 2 surged with block and pumped   7 0 compressed air   2 0 bailed only   1 0 pumped only   5 1 pumped slowly   5 0 other   20 min.   13. Water clarity   15 min well   0.0 inches   0.0 pumped slowly   5 0 other   20 min.   13. Water clarity   15 min well   15 min well   2.0 pumped slowly   5 0 other   20 min.   15 min well   15 min well   2.0 pumped slowly   15 0 other   20 min.   15 min well   2.0 pumped slowly   20 min.	velopment	After D	Development	Before D	to Water	11 Depth t	□ No	Yes □	· 🗵	arged dry?	1. Can this well be purg
surged with bailer and bailed surged with bailer and bailed surged with block and bailed surged with block and pumped surged with block and surged with surged surged with surged surged with surged surged with surged surged with surged surged with surged surged with surged surged with surged surged with surged surged with surged surged surged surged surged surged with surged surged surged su	12.00 0		9 26 0							mathad.	2 Well dayslamment me
surged with bailer and pumped   6 1   3   42   5   5   5   5   5   5   5   5   5	13.00 ft.		δ.20 π.	a.				4.1	. 153		-
surged with block and bailed surged with block and pumped   62   Surged with block and pumped   62   Surged with block and pumped   70   Compressed air   20   70   Dumped only   51   Dumped only   51   Dumped slowly   50   Other   20   20   Dimped slowly   50   Other   20   20   Describe   20   Des					-				_		•
surged with block and pumped   62   70   70   70   70   70   70   70   7	n4/1999	06	06/04/1999	h 06/		Date		-			-
surged with block, balled, and pumped compressed air congressed and congressed an	0 1/1 1 2 2 2	00,	30,0 1,1333	0.				-			-
compressed air bailed only											_
bailed only pumped slowly   10   51   10   50   50   50   50   50	3:35 pm	C	03·15 pm	· 0.		Time					-
pumped only pumped slowly other	5.55 pm	·	05.15 pm	<b>U</b> . 0.		Thire				ſ	-
bottom    Solution   S	0.0 inches		ΩΩ inches		ent in wall	12 Sadima					·
13. Water clarity   Clear   10   Clear   2   2   2	0.0 menes		0.0 menes			1			_		
3. Time spent developing well 20 min.  4. Depth of well (from top of well casing) 13.0 ft.  5. Inside diameter of well 2.06 in.  6. Volume of water in filter pack and well casing 4.3 gal.  7. Volume of water removed from well 4.0 gal.  8. Volume of water added (if any) gal.  9. Source of water added	2.0	Class 🖂	⊠ 10	Class M						у	
Low turb - light   Low turb - light   Drown		Turbid 🗆	□ 15	Turbid 🗆	ciarity	15. Water C			U		otner
4. Depth of well (from top of well casing)  5. Inside diameter of well  6. Volume of water in filter pack and well casing  4.3 gal.  7. Volume of water removed from well  8. Volume of water added (if any)  9. Source of water added  10. Analysis performed on water added?  (If yes, attach results)  10. Analysis performed on water added?  11. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  11. Developed using 3' HDPE bailer - purged dry multiple times  12. Developed using 3' HDPE bailer - purged dry multiple times  13. Of in.  14. Total suspended mg/l solids  15. COD mg/l  16. Well developed by: Person's Name and Firm  Jerry Puetz  STS Consultants Ltd.  17. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times			•				0 min.	20		oing well	<ol><li>Time spent developin</li></ol>
5. Inside diameter of well 2.06 in.  6. Volume of water in filter pack and well casing 4.3 gal.  7. Volume of water removed from well 4.0 gal.  8. Volume of water added (if any) gal.  9. Source of water added [if any] gal.  10. Analysis performed on water added? Yes No (If yes, attach results)  10. Analysis performed on water added? Yes No (If yes, attach results)  11. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  11. hereby certify that the above information is true and correct to the browledge.	o - light										
6. Volume of water in filter pack and well casing 4.3 gal.  7. Volume of water removed from well 4.0 gal.  8. Volume of water added (if any) gal.  9. Source of water added —————————————————————————————————		brown	/n	brown			0 ft.	13.0		n top of well casing)	4. Depth of well (from t
Casing   4.3 gal.   Fill in if drilling fluids were used and well is at solid waste facility:  7. Volume of water removed from well   4.0 gal.    8. Volume of water added (if any)   gal.    9. Source of water added   15. COD   mg/l    10. Analysis performed on water added?   Yes   No (If yes, attach results)   16. Well developed by: Person's Name and Firm    17. Additional comments on development:   Developed using 3' HDPE bailer - purged dry multiple times    18. Volume of water removed from well   4.0 gal.    19. Source of water added   mg/l    10. Analysis performed on water added?   Yes   No    10. Analysis performed on water added?   Test of the least o							6 in.	2.06		well	5. Inside diameter of we
Facility Address or Owner/Responsible Party Address  4.3 gal.  Fill in if drilling fluids were used and well is at solid waste facility:  14. Total suspended mg/l solids  15. COD mg/l  16. Well developed by: Person's Name and Firm  Jerry Puetz  STS Consultants Ltd.  17. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times			<del></del>								
Fill in if drilling fluids were used and well is at solid waste facility:  7. Volume of water removed from well  8. Volume of water added (if any)  9. Source of water added  (If yes, attach results)  10. Analysis performed on water added?  (If yes, attach results)  11. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  12. Fill in if drilling fluids were used and well is at solid waste facility:  13. Total suspended mg/l  14. Total suspended mg/l  15. COD mg/l  16. Well developed by: Person's Name and Firm  Jerry Puetz  STS Consultants Ltd.								4.0		i filter pack and well	
7. Volume of water removed from well  8. Volume of water added (if any)  9. Source of water added  10. Analysis performed on water added?  (If yes, attach results)  10. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  11. Developed using 3' HDPE bailer - purged dry multiple times  12. Total suspended mg/l  13. COD mg/l  14. Total suspended solids  15. COD mg/l  16. Well developed by: Person's Name and Firm  Jerry Puetz  STS Consultants Ltd.						1	3 gal.	4.3			casing
14. Total suspended   mg/l     15. COD   mg/l     16. Well developed by: Person's Name and Firm     17. Additional comments on development:     18. Developed using 3' HDPE bailer - purged dry multiple times     18. Volume of water added   mg/l     19. COD   mg/l     16. Well developed by: Person's Name and Firm     18. Jerry Puetz     STS Consultants Ltd.     19. Cod   STS Cod   STS Cod   STS Cod   STS Cod   STS Cod   STS Cod   STS Cod   STS Cod   STS Cod   STS Cod	ity:	waste faci	d and well is at solid	were used an	lling fluids	Fill in if dril					
Source of water added (if any)  Source of water added  Source of wat							0 gal.	4.0		emoved from well	7. Volume of water rem
2). Source of water added 15. COD mg/l  16. Well developed by: Person's Name and Firm  Jerry Puetz  (If yes, attach results)  17. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  Facility Address or Owner/Responsible Party Address  I hereby certify that the above information is true and correct to the band of the properties of the propertie	mg/l		mg/l		uspended						
16. Well developed by: Person's Name and Firm   10. Analysis performed on water added?   Yes \omega No (If yes, attach results)   Jerry Puetz     STS Consultants Ltd.     17. Additional comments on development: Developed using 3' HDPE bailer - purged dry multiple times     Facility Address or Owner/Responsible Party Address   I hereby certify that the above information is true and correct to the band of the property of the party Address or Owner/Responsible Party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify that the above information is true and correct to the band of the party Address   I hereby certify the party Address   I hereby certify the party Address   I hereby certify the party Address   I hereby certify the party Address   I hereby certify the party Addre						solids	gal.			dded (if any)	8. Volume of water add
10. Analysis performed on water added?  (If yes, attach results)  STS Consultants Ltd.  17. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  Facility Address or Owner/Responsible Party Address  I hereby certify that the above information is true and correct to the tangender.	mg/l		mg/l			15. COD				ded	9. Source of water adde
10. Analysis performed on water added?  (If yes, attach results)  STS Consultants Ltd.  17. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  Facility Address or Owner/Responsible Party Address  I hereby certify that the above information is true and correct to the taxon belonged.			Name and Firm	Person's Nar	veloped by:	16. Well dev					
(If yes, attach results)  STS Consultants Ltd.  17. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  Facility Address or Owner/Responsible Party Address  I hereby certify that the above information is true and correct to the behavior of the provided of t							⊠ No	Yes 🗵		ed on water added?	10. Analysis performed
17. Additional comments on development:  Developed using 3' HDPE bailer - purged dry multiple times  Facility Address or Owner/Responsible Party Address  I hereby certify that the above information is true and correct to the behavior of the provided of t			T . 1		•					ılts)	(If yes, attach results
Developed using 3' HDPE bailer - purged dry multiple times  Facility Address or Owner/Responsible Party Address  I hereby certify that the above information is true and correct to the behave the behavior of			s Ltd.	nsultants L	STS Co						·
knowledge.						es	nultiple tim	dry mu	r - purged	=	
knowledge.						T			Address	wner/Responsible Party A	Facility Address or Own
Name.	the best of my	d correct to	tormation is true an	above inform	tify that the				- 1001 400	I with the second seco	
		· · · · · · · · · · · · · · · · · · ·	10 11	100	1		<del></del>				Name:
Firm: One Hour Martinizing Dry Cleaning Service Signature:		7	7. Ja	1/14	fa	Signature:	rice	; Servic	/ Cleaning	ur Martinizing Dry	Firm: One Hour
Street: 1233 Military Avenue Print Name: PAUL M. GARVEY	7	RUE	M. GA	UL /	: PA	Print Name:				ilitary Avenue	Street: 1233 Mili
City/State/Zip: Green Bay, Wisconsin Firm: STS Consultants, Ltd.			nts, Ltd.	onsultants,	STS C	Firm:			sin	reen Bay, Wisconsi	City/State/Zin: Gre

Route To:

Watershed/Wastewater

## MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

Waste Management  $\square$ 

	n/Redevelopment 🗀	Otner 🗆					
Facility/Project Name	County		Well Name				
One Hour Martinizing Dry Cleaning S	ervice	Brown	MW-3				
Facility License, Permit or Monitoring Number	County Code 5	Wis. Unique Well Nur	mber DN	R Well Number			
1. Can this well be purged dry?	⊠ Yes □ No	11. Depth to Water	Before Develop	ment After Development			
2. Well development method:		(from top of	- 5.6	70 A D.m. 0			
surged with bailer and bailed	⊠ 41	well casing)	a. 5.5	58 ft. Dry ft.			
surged with bailer and pumped	□ 61						
surged with block and bailed		Date	ь. 06/17/199	9 06/17/1999			
surged with block and pumped		Build	0. 00/1//199	00/1//1999			
surged with block, bailed, and pumped	□ 70						
compressed air	□ 70 □ 20	Time	c. 09:20 as	m 09:50 am			
bailed only	□ 10		0. 09.20 a.				
pumped only	□ 51	12. Sediment in well	i	nches inches			
pumped slowly	□ 50	bottom					
other		13. Water clarity	Clear ⊠ 10	Clear ⊠ 20			
		,	Turbid 🗆 15	Turbid  25			
3. Time spent developing well	30 min.		(Describe)	(Describe)			
4. Depth of well (from top of well casing)	12.5 ft.						
5. Inside diameter of well	2.06 in.						
6. Volume of water in filter pack and well	6.21						
casing	6.2 gal.						
		Fill in it drilling fluids	were used and well is	s at solid waste facility:			
7. Volume of water removed from well	4.0 gal.			,			
		14. Total suspended solids		mg/l mg/l			
8. Volume of water added (if any)	gal.	Solius					
9. Source of water added		15. COD		mg/l mg/l			
Address to the second s		16. Well developed by:	Person's Name and I	Firm			
10. Analysis performed on water added?	□ Yes ⊠ No	Jim Cal	away				
(If yes, attach results)		CTC Co					
17. Additional comments on development:		313 C0	nsultants Ltd.				
Bailed monitoring well dry three time	.s						
Banda membering went and times times							
Facility Address or Owner/Responsible Party Address	266						
Tuently Tradices of Owner responsible Fairly Tradi-			e above information is	s true and correct to the best of my			
Name:		knowledge.					
Firm: One Hour Martinizing Dry Cle	aning Service	Signature:	PA.	Many.			
Street: 1233 Military Avenue		Print Name: Pau	uM. G	GARVE/1			
		ama c					
City/State/Zip: Green Bay, Wisconsin		Firm: STS C	Consultants, Ltd.				

## MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

	wasiewaie		wasie Management L			•	
Remediatio	n/Redevelo		Other 🗆				<u> </u>
Facility/Project Name		County	_	Well Name		TT 7 4	
One Hour Martinizing Dry Cleaning S	Service		Brown		M	W-4	
Facility License, Permit or Monitoring Number		County Code	Wis. Unique Well Nu	mber	DNR Well	Number	
		5	ļ				
Can this well be purged dry?	⊠ Yes	□ No		Before De	velonment	After De	velopment
1. Can ans wen be purged any:	<b>2</b> 103		11. Depth to Water	Belofe Be	velopinone	111101 50	velopment
2. Well development method:			(from top of	a.	3.06 ft.		Dry ft.
surged with bailer and bailed	⊠ 4	1	well casing)	a.	J.00 It.		Diy it.
surged with bailer and pumped	□ 6						
surged with block and bailed	□ 4		Date	b. 06/1	7/1999	06/	17/1999
surged with block and pumped	□ 6	2					
surged with block, bailed, and pumped	7	0					
compressed air	□ 2	0	Time	c. 09	:05 am	0	9:45 am
bailed only	1	0					
pumped only	□ 5	1	12. Sediment in well		inches		inches
pumped slowly	□ 5		bottom				
other	. 🗆 🗵	<u> </u>	13. Water clarity		1 0	Clear 🛛	2 0
				Turbid 🗆	1 5	Turbid 🗆	2 5
3. Time spent developing well		40 min.		(Describe)		(Describe)	
4. Depth of well (from top of well casing)	1	2.5 ft.		-			
							·
5. Inside diameter of well	2	.06 in.	1				
6. Volume of water in filter pack and well		05.					
casing		8.5 gal.	1				
			Fill in if drilling fluids	s were used and	well is at soli	d waste facil	ity:
7. Volume of water removed from well		6.0 gal.					_
			14. Total suspended solids		mg/l		mg/l
8. Volume of water added (if any)		gal.	Solius				
9. Source of water added			15. COD		mg/l		mg/l
9. Source of water added					Ü		J
			16. Well developed by	Person's Nam	e and Firm	······	
10. Analysis performed on water added?	☐ Yes	⊠ No					
(If yes, attach results)			Jim Cal	away			
			STS Co	nsultants Lt	d.		
17. Additional comments on development:							
Bailed monitoring well dry three time	es						
Facility Address or Owner/Responsible Party Address	ess		I hereby certify that th	e above inform	ation is true a	nd correct to	the hest of my
			knowledge.			0011001 10	are ocsi or my
Name:				101	1/1		
Firm: One Hour Martinizing Dry Cle	aning Se	rvice	Signature:	VIA	Man		
Thin.			Signature.	/>		$\overline{}$	
Street: 1233 Military Avenue			Print Name: 14	UL M	GA	EVEY	•
			Time i vanie.				
City/State/Zip: Green Bay, Wisconsin			Firm: STS C	Consultants,	Ltd.		
					***	· · · · · · · · · · · · · · · · · · ·	

## MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 6-97

	d/Wastewat		Waste Management [			
	ion/Redevel		Other 🗆	1,,,	413.7	
Facility/Project Name	~ .	County	_	We	ell Name	7 1
One Hour Martinizing Dry Cleaning	Service	County Code	Brown Wis. Unique Well Nu	mbor	DNR Well	Z-1
Facility License, Permit or Monitoring Number	··	5	wis. Onique well Nu	mber	DINK Well	Number
1. Can this well be purged dry?	⊠ Ye:	s 🗆 No	11. Depth to Water	Bef	ore Development	After Development
2 Well development weether to			(from top of		10.07.0	00.45 -
Well development method:     surged with bailer and bailed	⊠ 4	1	well casing)	a.	12.87 ft.	22.45 ft.
		1				
surged with bailer and pumped surged with block and bailed		2	Date	b.	06/04/1999	06/04/1999
surged with block and pumped		2	Butt	U.	00/01/1999	00/01/1999
surged with block, bailed, and pumped		0				
compressed air		0	Time	c.	02:40 pm	03:00 pm
bailed only		0	1 11110	٥.	02.10 pm	05.00 pm
pumped only		1	12. Sediment in well		0.5 inches	0.0 inches
pumped slowly		0	bottom		O.D Mones	0.0 menes
other			13. Water clarity	Cle	ar 🗆 10	Clear 20
Other	U ==	2 <u>2.0</u>	15. Water charty		bid ⊠ 15	Turbid ⊠ 2.5
27.		20 :			scribe)	(Describe)
3. Time spent developing well		20 min.		•	brown - high	
4 D	_	22.5 ft.			rb - fine	Well purges dry quickly - purged
4. Depth of well (from top of well casing)	2	.2.J II.			diment in well	dry 4 times today
5. Inside diameter of well		2.06 in.			difficit iii wen	dry 4 times today
5. hiside diameter of well	2	OO III.				
6. Volume of water in filter pack and well						
casing		8.6 gal.				
vasmig.		0.0 gui.	Fill in if drilling fluids	o wara y	read and well is at soli	d wasta facilitus
		0.0	rm m n drining naids	s were i	iseu anu wen is at son	u wasie facility.
7. Volume of water removed from well		8.0 gal.	14. Total suspended		ma/l	a //
0.77.1		•	solids		mg/l	mg/l
8. Volume of water added (if any)		gal.	Solids			
9. Source of water added			15. COD		mg/l	mg/l
9. Source of water added						
			16. Well developed by	Perso	n's Name and Firm	
10. Analysis performed on water added?	☐ Yes	s ⊠ No	Jerry Pı			
(If yes, attach results)					omen T ed	
17			\$15 Cc	onsuita	ants Ltd.	
17. Additional comments on development: Surged and purged using a 5' PVC b	ailer - pu	rged dry 4 tii	mes - 2.5 gallons to	purge	dry, less each att	empt
Facility Address or Owner/Responsible Party Add	lress		I haraby cortify that th	a abau	a information is true or	nd correct to the best of my
•			knowledge.	ie augvi	e imormation is true at	id correct to the best of my
Name:			Milowieuge.		· · · · · · · · · · · · · · · · · · ·	
One Here Madiately a Dec Cl		•		) /	OM M	7
Firm: One Hour Martinizing Dry Cl	eaning Se	rvice	Signature:	2_2	1KL JO	
1022 3 (1112 4			$+$ $^{\prime}$ $^{\prime}$	1.11	us /	under
Street: 1233 Military Avenue			Print Name:	406	THE CAP	ever-1
City/State/Zip: Green Bay, Wisconsin		<u></u>	Firm: STS C	Consu	Itants, Ltd.	



## Robert E. Lee & Associates, Inc.

### Engineering, Surveying, Laboratory Services

2825 S. Webster Ave. P.O. Box 2100 Green Bay, WI 54306-2100 Phone: (920) 336-6338

Fax: (920) 336-9141 E-Mail: rel@netnet.net

Milwaukee Area 830 Armour Rd. Oconomowoc, WI 53066 Phone: (414)569-8893 1-800-775-8893

Fax: (414)569-7995

Wisconsin Certification Number: 405043870

**PAUL GARVEY** STS CONSULTANTS LTD - GREEN BAY 1035 KEPLER DR **GREEN BAY WI 54311** 

Phone:

(920)468-1978

Fax:

(920)468-3312

Client ID:

000875100

Contact ID:

3487

### Sample Information

Report Date:

6/29/1999

Chain Number: 66180

Project No:

24871XF

Project Name: 24871XF

Receive Date:

6/07/1999

Sample Date:

6/04/1999

Attest: Str. Herof

### Robert E. Lee & Associates, Inc.

Wisconsin Certification Number: 405043870 Certificate of Analysis Report

STS Consultants Ltd - Green Bay

1035 Kepler Dr

Green Bay WI 54311

Project Number: 24871XF

Project Name:

24871XF

Attn.: Paul Garvey Phone: (920)468-1978

Fax: (920)468-3312

Client ID: 000875100

Chain: 66180

Report Date: 6/29/1999

Method Parameter Name	Result	Units Flag	MDE	POL Ar	ils. Date 🚜	Analyst
Lab No. Collect Date Sample ID						
99REL009700 6/04/1999 PZ-1 (2)						
SM-2540G Total Solids	84	%	0.010	0.033	6/08/1999	DJN
SW-846-8021B Volatile Organic Analysis	See Attached				6/15/1999	JF
99REL009701 6/04/1999 PZ-1 (3)						
SM-2540G Total Solids	84	%	0.010	0.033	6/08/1999	DJN
SW-846-8021B Volatile Organic Analysis	See Attached				6/14/1999	JF
99REL009702 6/04/1999 MW-2 (3)						
SM-2540G Total Solids	78	%	0.010	0.033	6/08/1999	DJN
SW-846-8021B Volatile Organic Analysis	See Attached				6/14/1999	JF
99REL009703 6/04/1999 MEOH BLANK						
SW-846-8021B Volatile Organic Analysis	See Attached				6/14/1999	JF

### ROBERT E. LEE & ASSOCIATES, INC.

CLIENT:

STS CONSULTANTS LTD - GREEN BAY

PROJECT:

24871XF

CHAIN NUMBER:

66180

### **NARRATIVE**

This narrative is relevant to sample PZ-1 (2).

The sample was analyzed for volatile organic compounds following SW-846 Method 8260.

The following is a summary of the quality control results:

- 1. The reported compounds were not detected in the method blank.
- 2. The precision between the matrix spike recovery and the matrix spike duplicate recovery was within laboratory limits for each of the reported compounds except for 1,1,1-trichloroethane, 1,1-dichloropropene, 1,1-dichloroethene, bromomethane, dichlorodifluoromethane and vinyl chloride. The data was accepted because the compounds were not detected in the sample.
- 3. The matrix spike recovery was within laboratory limits for each of the reported compounds except for dichlorodifluoromethane which was below laboratory limits. The data was accepted because method spike recoveries were within laboratory limits for these compounds.
- 4. The matrix spike duplicate recovery was within laboratory limits for each of the reported compounds except for bromomethane which was above laboratory limits. The data was accepted because the compound was not detected in the sample even though the results may have been biased high.
- 5. The surrogate recovery was within laboratory limits for each of the three surrogates spiked.
- 6. The initial and final calibration check standards verified the calibration curve for each of the reported compounds.

Steve Heraly

**Laboratory Coordinator** 

JF

### ROBERT E. LEE & ASSOCIATES, INC

LABORATORY SERVICES

2825 S. WEBSTER AVE. P.O. BOX 2100

GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN SOIL/SLUDGE BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

**CLIENT: STS Consultants, Ltd-Green Bay** 

DATE SAMPLED: June 04, 1999 DATE ANALYZED: June 15, 1999

**ANALYZED BY: JF** 

PROJECT: 24871XF
CHAIN NUMBER: 66180
REL NUMBER: 99REL009700
SAMPLE: PZ-1 (2)
DILUTION: 1 to 10

	MDL	PQL	RESULT
ANALYTE	ug/Kg	ug/Kg	
Benzene	116	387	
Bromobenzene	209	696	ND
Bromochloromethane	103	342	ND
Bromodichloromethane	153	511	ND
Bromoform	278	927	ND
Bromomethane	209	696	ND
n-Butylbenzene	24.7	82.4	ND
sec-Butylbenzene	215	717	ND
tert-Butylbenzene	174	581	ND
Carbon Tetrachloride	141	470	ND
Chlorobenzene	59.3	198	ND
Chloroethane	307	1020	ND
Chloroform	124	412	ND
Chloromethane	132	441	ND
2-Chlorotoluene	155	515	ND
4-Chlorotoluene	404	1350	ND
Dibromochloromethane	119	396	ND
1,2-Dibromo-3-Chloropropane	142	474	ND
1,2-Dibromoethane	248	828	ND
Dibromomethane	202	672	ND
1,2-Dichlorobenzene	22.3	74.2	ND
1,3-Dichlorobenzene	300	1000	ND
1,4-Dichlorobenzene	279	931	ND
Dichlorodifluoromethane	169	565	ND
1,1-Dichloroethane	91.5	305	ND
1,2-Dichloroethane	216	721	ND
1,1-Dichloroethene	68.0	227	ND
cis 1,2-Dichloroethene	115	383	ND
trans 1,2-Dichloroethene	130	433	ND
1,2-Dichloropropane	58.1	194	ND

	MDL	PQL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
1,3-Dichloropropane	162	540	ND
2,2-Dichloropropane	480	1600	ND
1,1-Dichloropropene	156	519	ND
cis-1,3-Dichloropropene	59.3	198	ND
trans-1,3-Dichloropropene	84.1	280	ND
Ethylbenzene	120	400	ND
Hexachlorobutadiene	45.7	152	ND
Isopropylbenzene	143	478	ND
p-Isopropyitoluene	76.6	255	ND
Methylene Chloride	157	523	ND
Naphthalene	50.7	169	ND
n-Propylbenzene	221	738	ND
Styrene	51.9	173	ND
1,1,1,2-Tetrachloroethane	116	387	ND
1,1,2,2-Tetrachloroethane	323	1080	ND
Tetrachloroethene	208	692	10100
Toluene	68.0	227	ND
1,2,3-Trichlorobenzene	32.1	107	ND
1,2,4-Trichlorobenzene	30.9	103	ND
1,1,1-Trichloroethane	187	622	ND
1,1,2-Trichloroethane	124	412	ND
Trichloroethene	131	437	511
Trichlorofluoromethane	303	1010	ND
1,2,3-Trichloropropane	612	2040	ND
1,2,4-Trimethylbenzene	287	956	ND
1,3,5-Trimethylbenzene	214	713	ND
Vinyl Chloride	86.5	288	ND
m&p-Xylene	242	808	ND
o-Xylene	110	367	ND

MDL's and results based on dry weight.

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Herely Ja7 L

THIS REPORT IS VALID ONLY WHEN ACCOMPANIED WITH THE APPROPRIATE NARRATIVE.

## ROBERT E. LEE & ASSOCIATES, INC.

CLIENT:

STS CONSULTANTS LTD - GREEN BAY

PROJECT:

24871XF

CHAIN NUMBER:

66180

### **NARRATIVE**

This narrative is relevant to samples PZ-1 (3) and MW-2 (3).

The samples were analyzed for volatile organic compounds following SW-846 Method 8260.

The following is a summary of the quality control results:

- 1. The reported compounds were not detected in the method blank.
- 2. The precision between the matrix spike recovery and the matrix spike duplicate recovery was within laboratory limits for each of the reported compounds except for dichlorodifluoromethane, chloromethane, vinyl chloride, chloroethane and trichlorofluoromethane. The data was accepted because the compounds were not detected in the samples.
- 3. The matrix spike recovery was within laboratory limits for each of the reported compounds except for dichlorodifluoromethane which was below laboratory. The data was accepted because method spike recoveries were within laboratory limits for this compound.
- 4. The matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 5. The surrogate recovery for all samples was within laboratory limits for each of the three surrogates spiked.
- 6. The initial and final calibration check standards verified the calibration curve for each of the reported compounds.

Steve Heraly

Laboratory Coordinator

JF

### **ROBERT E. LEE & ASSOCIATES, INC**

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 **GREEN BAY, WIS 54306** 

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN SOIL/SLUDGE BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

CLIENT: STS Consultants, Ltd-Green Bay

DATE SAMPLED: June 04, 1999 DATE ANALYZED: June 14, 1999

**ANALYZED BY: JF** 

PROJECT: 24871XF **CHAIN NUMBER: 66180** REL NUMBER: 99REL009701 SAMPLE: PZ-1 (3)

**DILUTION: None** 

	MDL	PQL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
Benzene	11.4	38.0	ND
Bromobenzene	20.5	68.3	ND
Bromochloromethane	10.1	33.5	ND
Bromodichloromethane	15.0	50.1	ND
Bromoform	27.3	90.9	ND
Bromomethane	20.5	68.3	ND
n-Butylbenzene	2.42	8.08	ND
sec-Butylbenzene	21.1	70.3	ND
tert-Butylbenzene	17.1	57.0	ND
Carbon Tetrachloride	13.8	46.1	ND
Chlorobenzene	5.82	19.4	ND
Chloroethane	30.1	100	ND
Chloroform	12.1	40.4	ND
Chloromethane	13.0	43.2	ND
2-Chlorotoluene	15.2	50.5	ND
4-Chlorotoluene	39.6	132	ND
Dibromochloromethane	11.6	38.8	ND
1,2-Dibromo-3-Chloropropane	13.9	46.5	ND
1,2-Dibromoethane	24.4	81.2	ND
Dibromomethane	19.8	65.9	ND
1,2-Dichlorobenzene	2.18	7.27	ND
1,3-Dichlorobenzene	29.5	98.2	ND
1,4-Dichlorobenzene	27.4	91.3	ND
Dichlorodifluoromethane	16.6	55.4	ND
1,1-Dichloroethane	8.97	29.9	ND
1,2-Dichloroethane	21.2	70.7	ND
1,1-Dichloroethene	6.67	22.2	ND
cis 1,2-Dichloroethene	11.3	37.6	21.2 (p)
trans 1,2-Dichloroethene	12.7	42.4	ND
1,2-Dichloropropane	5.70	19.0	ND
cis 1,2-Dichloroethene trans 1,2-Dichloroethene	11.3 12.7 5.70	37.6 42.4	21.2 (p) ND

	MDL	POL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
1,3-Dichloropropane	15.9	52.9	ND
2,2-Dichloropropane	47.0	157	ND
1,1-Dichloropropene	15.3	50.9	ND
cis-1,3-Dichloropropene	5.82	19.4	ND
trans-1,3-Dichloropropene	8.24	27.5	ND
Ethylbenzene	11.8	39.2	ND
Hexachlorobutadiene	4.49	15.0	ND
Isopropylbenzene	14.1	46.9	ND
p-Isopropyltoluene	7.52	25.1	ND
Methylene Chloride	15.4	51.3	ND
Naphthalene	4.97	16.6	ND
n-Propylbenzene	21.7	72.3	ND
Styrene	5.09	17.0	ND ·
1,1,1,2-Tetrachloroethane	11.4	38.0	ND
1,1,2,2-Tetrachloroethane	31.6	105	ND
Tetrachloroethene	20.4	67.9	2760
Toluene	6.67	22.2	ND
1,2,3-Trichlorobenzene	3.15	10.5	ND
1,2,4-Trichlorobenzene	3.03	10.1	ND
1,1,1-Trichloroethane	18.3	61.0	ND
1,1,2-Trichloroethane	12.1	40.4	ND
Trichloroethene	12.9	42.8	134
Trichlorofluoromethane	29.7	99.0	ND
1,2,3-Trichloropropane	60.0	200	ND
1,2,4-Trimethylbenzene	28.1	93.8	ND
1,3,5-Trimethylbenzene	21.0	69.9	ND
Vinyl Chloride	8.49	28.3	ND
m&p-Xylene	23.8	79.2	ND
o-Xylene	10.8	36.0	ND

MDL's and results based on dry weight.

104 % Dibromofluoromethane surrogate recovery..... 107 % Toluene-d8 surrogate recovery..... Bromofluorobenzene surrogate recovery..... 104 %

ND= COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

THIS REPORT IS VALID ONLY WHEN ACCOMPANIED WITH THE APPROPRIATE NARRATIVE.

### ROBERT E. LEE & ASSOCIATES, INC

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

CLIENT: STS Consultants, Ltd-Green Bay

DATE SAMPLED: June 04, 1999 DATE ANALYZED: June 14, 1999

**ANALYZED BY: JF** 

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN SOIL/SLUDGE BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF
CHAIN NUMBER: 66180
REL NUMBER: 99REL009702

SAMPLE: MW-2 (3)
DILUTION: None

	MDL	PQL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
Benzene	12.6	42.1	ND
Bromobenzene	22.7	75.7	ND
Bromochloromethane	11.2	37.2	ND
Bromodichloromethane	16.7	55.6	ND
Bromoform	30.2	101	ND
Bromomethane	22.7	75.7	ND
n-Butylbenzene	2.69	8.96	ND
sec-Butylbenzene	23.4	78.0	ND
tert-Butylbenzene	19.0	63.2	ND
Carbon Tetrachloride	15.3	51.1	ND
Chlorobenzene	6.45	21.5	ND
Chloroethane	33.3	111	ND
Chloroform	13.4	44.8	ND
Chloromethane	14.4	47.9	ND
2-Chlorotoluene	16.8	56.0	ND
4-Chlorotoluene	44.0	147	ND
Dibromochloromethane	12.9	43.0	ND
1,2-Dibromo-3-Chloropropane	15.5	51.5	ND
1,2-Dibromoethane	27.0	90.1	ND
Dibromomethane	21.9	73.0	ND
1,2-Dichlorobenzene	2.42	8.07	ND
1,3-Dichlorobenzene	32.7	109	ND
1,4-Dichlorobenzene	30.4	101	ND
Dichlorodifluoromethane	18.4	61.4	ND
1,1-Dichloroethane	9.95	33.2	ND
1,2-Dichloroethane	23.5	78.4	ND
1,1-Dichloroethene	7.39	24.6	ND
cis 1,2-Dichloroethene	12.5	41.7	ND
trans 1,2-Dichloroethene	14.1	47.1	ND
1,2-Dichloropropane	6.32	21.1	ND
MDL's and results based on dry	weight.		

	* ***********	500000000000000000	
	MDL	POL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
1,3-Dichloropropane	17.6	58.7	ND
2,2-Dichloropropane	52.2	174	ND
1,1-Dichloropropene	16.9	56.5	ND
cis-1,3-Dichloropropene	6.45	21.5	ND
trans-1,3-Dichloropropene	9.14	30.5	ND
Ethylbenzene	13.0	43.5	ND
Hexachlorobutadiene	4.97	16.6	ND
Isopropylbenzene	15.6	52.0	ND
p-Isopropyltoluene	8.33	27.8	ND
Methylene Chloride	17.1	56.9	ND
Naphthalene	5.51	18.4	ND
n-Propylbenzene	24.1	80.2	ND
Styrene	5.65	18.8	ND
1,1,1,2-Tetrachloroethane	12.6	42.1	ND
1,1,2,2-Tetrachloroethane	35.1	117	ND
Tetrachloroethene	22.6	75.3	106
Toluene	7.39	24.6	ND
1,2,3-Trichlorobenzene	3.50	11.7	ND
1,2,4-Trichlorobenzene	3.36	11.2	ND
1,1,1-Trichloroethane	20.3	67.7	ND
1,1,2-Trichloroethane	13.4	44.8	ND
Trichloroethene	14.2	47.5	ND
Trichlorofluoromethane	32.9	110	ND
1,2,3-Trichloropropane	66.5	222	ND
1,2,4-Trimethylbenzene	31.2	104	ND
1,3,5-Trimethylbenzene	23.3	77.5	ND
Vinyl Chloride	9.41	31.4	ND
m&p-Xylene	26.3	87.8	ND
o-Xylene	12.0	39.9	ND

MDL's and results based on dry weight.

Dibromofluoromethane surrogate recovery	100 %
Toluene-d8 surrogate recovery	104 %
Bromofluorobenzene surrogate recovery	99 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Heraly 1075

THIS REPORT IS VALID ONLY WHEN ACCOMPANIED WITH THE APPROPRIATE NARRATIVE.

### ROBERT E. LEE & ASSOCIATES, INC.

CLIENT:

STS CONSULTANTS LTD - GREEN BAY

PROJECT:

24871XF

CHAIN NUMBER:

66180

### **NARRATIVE**

This narrative is relevant to sample MEOH BLANK.

The sample was analyzed for volatile organic compounds following SW-846 Method 8260.

The following is a summary of the quality control results:

- 1. The reported compounds were not detected in the method blank.
- 2. The precision between the matrix spike recovery and the matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 3. The matrix spike recovery was within laboratory limits for each of the reported compounds.
- 4. The matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 5. The surrogate recovery was within laboratory limits for each of the three surrogates spiked.
- 6. The initial and final calibration check standards verified the calibration curve for each of the reported compounds.

Steve Heraly

Laboratory Coordinator

JF

### ROBERT E. LEE & ASSOCIATES, INC

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

SOIL/SLUDGE BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN

**CHAIN NUMBER: 66180** REL NUMBER: 99REL009703 **SAMPLE: MEOH BLANK** 

PROJECT: 24871XF

**DILUTION: None** 

**CLIENT: STS Consultants, Ltd-Green Bay** 

DATE SAMPLED: June 04, 1999 DATE ANALYZED: June 14, 1999 **ANALYZED BY: JF** 

	MDL	POL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
Benzene	9.40	31.3	ND
Bromobenzene	16.9	56.3	ND
Bromochloromethane	8.30	27.7	ND
Bromodichloromethane	12.4	41.3	ND
Bromoform	22.5	75.0	ND
Bromomethane	16.9	56.3	ND
n-Butylbenzene	2.00	6.67	ND
sec-Butylbenzene	17.4	58.0	ND
tert-Butylbenzene	14.1	47.0	ND
Carbon Tetrachloride	11.4	38.0	ND
Chlorobenzene	4.80	16.0	ND
Chloroethane	24.8	82.7	ND
Chloroform	10.0	33.3	ND
Chloromethane	10.7	35.7	ND
2-Chlorotoluene	12.5	41.7	ND
4-Chlorotoluene	32.7	109	ND
Dibromochloromethane	9.60	32.0	ND
1,2-Dibromo-3-Chloropropane	11.5	38.3	ND
1,2-Dibromoethane	20.1	67.0	ND
Dibromomethane	16.3	54.3	ND
1,2-Dichlorobenzene	1.80	6.00	ND
1,3-Dichlorobenzene	24.3	81.0	ND
1,4-Dichlorobenzene	22.6	75.3	ND
Dichlorodifluoromethane	13.7	45.7	ND
1,1-Dichloroethane	7.40	24.7	ND
1,2-Dichloroethane	17.5	58.3	ND
1,1-Dichloroethene	5.50	18.3	ND
cis 1,2-Dichloroethene	9.30	31.0	ND
trans 1,2-Dichloroethene	10.5	35.0	ND
1,2-Dichloropropane	4.70	15.7	ND

	MDL	POL	RESULT
ANALYTE	<b>H</b>	ug/Kg	ug/Kg
1,3-Dichloropropane	13.1	43.7	ND
2,2-Dichloropropane	38.8	129	ND
1,1-Dichloropropene	12.6	42.0	ND
cis-1,3-Dichloropropene	4.80	16.0	ND
trans-1,3-Dichloropropene	6.80	22.7	ND
Ethylbenzene	9.70	32.3	ND
Hexachlorobutadiene	3.70	12.3	ND
Isopropylbenzene	11.6	38.7	ND
p-isopropyitoluene	6.20	20.7	ND
Methylene Chloride	12.7	42.3	ND
Naphthalene	4.10	13.7	ND
n-Propylbenzene	17.9	59.7	ND
Styrene	4.20	14.0	ND
1,1,1,2-Tetrachloroethane	9.40	31.3	ND
1,1,2,2-Tetrachloroethane	26.1	87.0	ND
Tetrachloroethene	16.8	56.0	ND
Toluene	5.50	18.3	ND
1,2,3-Trichlorobenzene	2.60	8.67	ND
1,2,4-Trichlorobenzene	2.50	8.33	ND
1,1,1-Trichloroethane	15.1	50.3	ND
1,1,2-Trichloroethane	10.0	33.3	ND
Trichloroethene	10.6	35.3	ND
Trichlorofluoromethane	24.5	81.7	ND
1,2,3-Trichloropropane	49.5	165	ND
1,2,4-Trimethylbenzene	23.2	77.3	ND
1,3,5-Trimethylbenzene	17.3	57.7	ND
Vinyl Chloride	7.00	23.3	ND
m&p-Xylene	19.6	65.3	ND
o-Xylene	8.90	29.7	ND

Dibromofluoromethane surrogate recovery	97	%
Toluene-d8 surrogate recovery	101	%
Bromofluorobenzene surrogate recovery	96	%

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

THIS REPORT IS VALID ONLY WHEN ACCOMPANIED WITH THE APPROPRIATE NARRATIVE.

## CHAIN OF CUSTODY RECORD

Nº -26181 CX#66/80/2



Contact Person Paul Garvey Phone No. 920 468-1978 Office Green Bay Project No. 2487/XF PO No. Project Name 3487/XF	☐ Rush☐ Verbal	Laboratory Robert E. L	
Sample Type    Ambient   Ambient   Sample Type   Sample Type   Sample Type   Sample Type   Sample Type   Sample Type   Sample Type   Sampl	Data  Analysis Re  Out  Figure  Analysis Re  Figure  Gm	equest (Include I	ments on Sample Major Contaminants)
PZ-1 (2) 6/4 09:35 X 2 50:1 XX	Voc (88)	Total Solids 970	
PZ-1 (3) 09245X 2		970	<u></u>
MW-2 (3) V 13:25 2 V VV		<u> </u>	28.61
Cl <del>MW-2 () 1335 2 -</del> MeoH Blank 1 MeoH X	Voc (8021)	970	3
7 - A - A - A - A - A - A - A - A - A -	ne 09:35 Delivery by:	attendific Date 6/7/	199 Time \$ 750
	ne /7.'00 Relinquished by:	Date	Time
Received by: Tall Date 6/1/99 Time	ne 1,00 P Relinquished by:	Date	Time
Received by: Salt lo fight; Date 6/7/99 Tim	ne //On Relinquished by:	Date	Time
Received for lab by: My Date 6-7-99 Tim	ne 3:25 Relinquished by:	Date	Time
Laboratory Comments Only: Seals Intact Upon Receipt? ☐ Ye	es 🗆 No 🗆 N/A 🖈 ile	b	
Final Disposition:	Comments (Weath	ther Conditions, Precautions, Hazards):	
Distribution: Original and Green - Laboratory Yellow - As needed Pink - Transporter (			9/9/cp10k

## Robert E. Lee & Associates, Inc.

### **Engineering, Surveying, Laboratory Services**

2825 S. Webster Ave. P.O. Box 2100 Green Bay, WI 54306-2100 Phone: (920) 336-6338 Fax: (920) 336-9141

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Milwaukee Area 830 Armour Rd. Oconomowoc, WI 53066

Phone: (414)569-8893 1-800-775-8893

Fax: (414)569-7995

Wisconsin Certification Number: 405043870

**PAUL GARVEY** STS CONSULTANTS LTD - GREEN BAY 1035 KEPLER DR **GREEN BAY WI 54311** 

Phone:

(920)468-1978

Fax:

(920)468-3312

Client ID:

000875100

Contact ID:

3487

#### Sample Information

Report Date:

6/25/1999

Chain Number: 66198

Project No:

24871XF

Project Name: MARTINIZING-1233 S MILITARY

Receive Date:

6/08/1999

Sample Date:

6/07/1999

Attest: Stu Heraf

### Robert E. Lee & Associates, Inc.

Wisconsin Certification Number: 405043870 Certificate of Analysis Report

STS Consultants Ltd - Green Bay

1035 Kepler Dr

Attn.: Paul Garvey Phone: (920)468-1978 Fax: (920)468-3312

Green Bay WI 54311

Project Number: 24871XF

Client ID: 000875100 Chain: 66198

Project Name:

MARTINIZING-1233 S MILITARY Report Date: 6/25/1999

Method Parameter Name	Result:	Units Flag	g MDL	PQL A	nis Date: /	Analyst
Lab No. Collect Date Sample ID	7 <b>4 1 1 1</b> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				i partir di 19 Li regione di 19	
99REL009793 6/07/1999 MW-3, S-2						
SM-2540G Total Solids	80	%	0.010	0.033	6/09/1999	DJN
SW-846-8021B Volatile Organic Analysis	See Attached				6/15/1999	JF
99REL009794 6/07/1999 MW-3, S-4						
SM-2540G Total Solids	77	%	0.010	0.033	6/09/1999	DJN
SW-846-8021B Volatile Organic Analysis	See Attached				6/15/1999	JF
99REL009795 6/07/1999 MW-4, S-2						
SM-2540G Total Solids	82	%	0.010	0.033	6/09/1999	DJN
SW-846-8021B Volatile Organic Analysis	See Attached				6/15/1999	JF

CLIENT:

STS CONSULTANTS LTD - GREEN BAY

PROJECT:

24871XF / MARTINIZING-1233 S MILITARY

CHAIN NUMBER:

66198

#### **NARRATIVE**

This narrative is relevant to samples MW-3, S-2; MW-3, S-4 and MW-4, S-2.

The samples were analyzed for volatile organic compounds following SW-846 Method 8260.

The following is a summary of the quality control results:

- 1. The reported compounds were not detected in the method blank.
- 2. The precision between the matrix spike recovery and the matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 3. The matrix spike recovery was within laboratory limits for each of the reported compounds.
- 4. The matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 5. The surrogate recovery for all samples was within laboratory limits for each of the three surrogates spiked.
- 6. The initial and final calibration check standards verified the calibration curve for each of the reported compounds.

Steve Heraly

Laboratory Coordinator

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100

GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN SOIL/SLUDGE BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

CLIENT: STS Consultants, Ltd - Green Bay

DATE SAMPLED: June 07, 1999 DATE ANALYZED: June 15, 1999

**ANALYZED BY: JF** 

PROJECT: 24871XF/Martinizing

**CHAIN NUMBER: 66198** 

REL NUMBER: 99REL009793 SAMPLE: MW-3, S-2

**DILUTION:** None

	MDL	POL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
Benzene	11.7	39.1	ND
Bromobenzene	21.1	70.3	ND
Bromochloromethane	10.4	34.5	ND
Bromodichloromethane	15.5	51.6	ND
Bromoform	28.1	93.6	ND ·
Bromomethane	21.1	70.3	ND
n-Butylbenzene	2.50	8.32	ND
sec-Butylbenzene	21.7	72.4	ND
tert-Butylbenzene	17.6	58.7	ND
Carbon Tetrachloride	14.2	47.4	ND
Chlorobenzene	5.99	20.0	ND
Chloroethane	30.9	103	ND
Chloroform	12.5	41.6	ND
Chloromethane	13.4	44.5	ND
2-Chlorotoluene	15.6	52.0	ND
4-Chlorotoluene	40.8	136	ND
Dibromochloromethane	12.0	39.9	ND
1,2-Dibromo-3-Chloropropane	14.4	47.8	ND
1,2-Dibromoethane	25.1	83.6	ND
Dibromomethane	20.3	67.8	ND
1,2-Dichlorobenzene	2.25	7.49	ND
1,3-Dichlorobenzene	30.3	101	ND
1,4-Dichlorobenzene	28.2	94.0	ND
Dichlorodifluoromethane	17.1	57.0	ND
1,1-Dichloroethane	9.23	30.8	ND
1.2-Dichloroethane	21.8	72.8	ND
1,1-Dichloroethene	6.86	22.9	ND
cis 1,2-Dichloroethene	11.6	38.7	ND
trans 1,2-Dichloroethene	13.1	43.7	ND
1,2-Dichloropropane	5.87	19.6	ND

	MOL	POL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
1,3-Dichloropropane	16.3	54.5	ND
2,2-Dichloropropane	48.4	161	ND
1,1-Dichloropropene	15.7	52.4	ND
cis-1,3-Dichloropropene	5.99	20.0	ND
trans-1,3-Dichloropropene	8.49	28.3	ND
Ethylbenzene	12.1	40.3	ND
Hexachlorobutadiene	4.62	15.4	ND
Isopropylbenzene	14.5	48.3	ND
p-Isopropyltoluene	7.74	25.8	ND
Methylene Chloride	15.8	52.8	ND
Naphthalene	5.12	17.1	ND
n-Propylbenzene	22.3	74.5	ND
Styrene	5.24	17.5	ND
1,1,1,2-Tetrachloroethane	11.7	39.1	ND
1,1,2,2-Tetrachloroethane	32.6	109	ND
Tetrachloroethene	21.0	69.9	ND
Toluene	6.86	22.9	ND
1,2,3-Trichlorobenzene	3.24	10.8	ND
1,2,4-Trichlorobenzene	3.12	10.4	ND
1,1,1-Trichloroethane	18.8	62.8	ND
1,1,2-Trichloroethane	12.5	41.6	ND
Trichloroethene	13.2	44.1	ND
Trichlorofluoromethane	30.6	102	ND
1,2,3-Trichloropropane	61.8	206	ND
1,2,4-Trimethylbenzene	29.0	96.5	ND
1,3,5-Trimethylbenzene	21.6	72.0	ND
Vinyl Chloride	8.74	29.1	ND
m&p-Xylene	24.5	81.5	ND
o-Xylene	11.1	37.0	ND

97 % Dibromofluoromethane surrogate recovery..... 101 % Toluene-d8 surrogate recovery..... 96 % Bromofluorobenzene surrogate recovery.....

ND= COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306 TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

CLIENT: STS Consultants, Ltd - Green Bay

DATE SAMPLED: June 07, 1999 DATE ANALYZED: June 15, 1999

**ANALYZED BY: JF** 

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN SOIL/SLUDGE BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF/Martinizing

CHAIN NUMBER: 66198

REL NUMBER: 99REL009794 SAMPLE: MW-3, S-4

**DILUTION:** None

	MDL	PQL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
Benzene	12.9	43.1	ND
Bromobenzene	23.2	77.4	ND
Bromochloromethane	11.4	38.0	ND
Bromodichloromethane	17.0	56.8	ND
Bromoform	30.9	103	ND
Bromomethane	23.2	77.4	ND
n-Butylbenzene	2.75	9.17	ND
sec-Butylbenzene	23.9	79.7	ND
tert-Butylbenzene	19.4	64.6	ND
Carbon Tetrachloride	15.7	52.2	ND
Chlorobenzene	6.60	22.0	ND
Chloroethane	34.1	114	ND
Chloroform	13.7	45.8	ND
Chloromethane	14.7	49.0	ND
2-Chlorotoluene	17.2	57.3	ND
4-Chlorotoluene	45.0	150	ND
Dibromochloromethane	13.2	44.0	ND
1,2-Dibromo-3-Chloropropane	15.8	52.7	ND
1,2-Dibromoethane	27.6	92.1	ND
Dibromomethane	22.4	74.7	
	33.4		
1,4-Dichlorobenzene	31.1		• • -
Dichlorodifluoromethane	18.8	62.8	ND
1,1-Dichloroethane	10.2	33.9	ND
1,2-Dichloroethane	24.1	80.2	ND
1,1-Dichloroethene	7.56	25.2	ND
cis 1,2-Dichloroethene	12.8	42.6	ND
trans 1,2-Dichloroethene	14.4	48.1	ND
1,2-Dichloropropane	6.46	21.5	ND
1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethene cis 1,2-Dichloroethene trans 1,2-Dichloroethene	2.47 33.4 31.1 18.8 10.2 24.1 7.56 12.8 14.4 6.46	8.25 111 104 62.8 33.9 80.2 25.2 42.6 48.1	ND ND ND ND

	MDL	PQL	RESULT
ANALYTE	ug/Kg	ug/Kg	ug/Kg
1,3-Dichloropropane	18.0	60.0	ND
2,2-Dichloropropane	53.3	178	ND
1,1-Dichloropropene	17.3	57.7	ND
cis-1,3-Dichloropropene	6.60	22.0	ND
trans-1,3-Dichloropropene	9.35	31.2	ND
Ethylbenzene	13.3	44.5	ND
Hexachlorobutadiene	5.09	17.0	ND
Isopropylbenzene	15.9	53.2	ND
p-Isopropyltoluene	8.52	28.4	ND
Methylene Chloride	17.5	58.2	NĐ
Naphthalene	5.64	18.8	ND
n-Propylbenzene	24.6	82.0	ND
Styrene	5.77	19.2	ND
1,1,1,2-Tetrachloroethane	12.9	43.1	ND .
1,1,2,2-Tetrachloroethane	35.9	120	ND
Tetrachloroethene	23.1	77.0	378
Toluene	7.56	25.2	ND
1,2,3-Trichlorobenzene	3.57	11.9	ND
1,2,4-Trichlorobenzene	3.44	11.5	ND
1,1,1-Trichloroethane	20.8	69.2	ND
1,1,2-Trichloroethane	13.7	45.8	ND
Trichloroethene	14.6	48.6	ND
Trichlorofluoromethane	33.7	112	ND
1,2,3-Trichloropropane	68.1	227	ND
1,2,4-Trimethylbenzene	31.9	106	ND
1,3,5-Trimethylbenzene	23.8	79.3	ND
Vinyl Chloride	9.62	32.1	ND
m&p-Xylene	26.9	89.8	ND
o-Xylene	12.2	40.8	ND

MDL's and results based on dry weight.

Dibromofluoromethane surrogate recovery	100 %
Toluene-d8 surrogate recovery	104 %
Bromofluorobenzene surrogate recovery	99 %

ND= COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Veraly GAS

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

**WISCONSIN CERTIFICATION NUMBER: 405043870** 

METHOD 8260, VOLATILE ORGANIC COMPOUNDS IN SOIL/SLUDGE BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

CLIENT: STS Consultants, Ltd - Green Bay

DATE SAMPLED: June 07, 1999 DATE ANALYZED: June 15, 1999

**ANALYZED BY: JF** 

PROJECT: 24871XF/Martinizing

**CHAIN NUMBER: 66198** 

REL NUMBER: 99REL009795 SAMPLE: MW-4, S-2

**DILUTION: None** 

ANALYTE	ug/Kg	***************************************	
		805.076	ug/Kg
Benzene	11.7	39.1	ND
Bromobenzene	21.1	70.3	ND
Bromochloromethane	10.4	34.5	ND
Bromodichloromethane	15.5	51.6	ND
Bromoform	28.1	93.6	ND
Bromomethane	21.1	70.3	ND
n-Butylbenzene	2.49	8.32	ND
sec-Butylbenzene	21.7	72.3	ND
tert-Butylbenzene	17.6	58.6	ND
Carbon Tetrachloride	14.2	47.4	, ND
Chlorobenzene	5.99	20.0	ND
Chloroethane	30.9	103	ND
Chloroform	12.5	41.6	ND
Chloromethane	13.3	44.5	ND
2-Chlorotoluene	15.6	52.0	ND
4-Chlorotoluene	40.8	136	ND
Dibromochloromethane	12.0	39.9	ND
1,2-Dibromo-3-Chloropropane	14.3	47.8	ND
1,2-Dibromoethane	25.1	83.6	ND
Dibromomethane	20.3	67.8	ND
1,2-Dichlorobenzene	2.25	7.48	ND
1,3-Dichlorobenzene	30.3	101	ND
1,4-Dichlorobenzene	28.2	94.0	ND
Dichlorodifluoromethane	17.1	57.0	ND
1,1-Dichloroethane	9.23	30.8	ND
1,2-Dichloroethane	21.8	72.8	ND
1,1-Dichloroethene	6.86	22.9	ND
cis 1,2-Dichloroethene	11.6	38.7	ND
trans 1,2-Dichloroethene	13.1	43.7	ND
MDI 's and results based on dry	5.86	19.5	ND

	MDL	POL	RESULT
ANALYTE	ug/Kg	ug/Kg	
1,3-Dichloropropane	16.3	54.5	
2,2-Dichloropropane	48.4	161	ND
1,1-Dichloropropene	15.7	52.4	ND
cis-1,3-Dichloropropene	5.99	20.0	ND
trans-1,3-Dichloropropene	8.48	28.3	ND
Ethylbenzene	12.1	40.3	ND
Hexachlorobutadiene	4.62	15.4	ND
Isopropylbenzene	14.5	48.2	ND
p-Isopropyltoluene	7.73	25.8	ND
Methylene Chloride	15.8	52.8	ND
Naphthalene	5.11	17.0	ND
n-Propylbenzene	22.3	74.4	ND
Styrene	5.24	17.5	ND
1,1,1,2-Tetrachloroethane	11.7	39.1	ND
1,1,2,2-Tetrachloroethane	32.6	109	ND
Tetrachloroethene	21.0	69.9	ND
Toluene	6.86	22.9	ND
1,2,3-Trichlorobenzene	3.24	10.8	ND
1,2,4-Trichlorobenzene	3.12	10.4	ND
1,1,1-Trichloroethane	18.8	62.8	ND
1,1,2-Trichloroethane	12.5	41.6	ND
Trichloroethene	13.2	44.1	ND
Trichlorofluoromethane	30.6	102	ND
1,2,3-Trichloropropane	61.7	206	ND
1,2,4-Trimethylbenzene	28.9	96.5	ND
1,3,5-Trimethylbenzene	21.6	71.9	ND
Vinyl Chloride	8.73	29.1	ND
m&p-Xylene	24.4	81.5	ND
o-Xylene	11.1	37.0	ND

MDL's and results based on dry weight.

Dibromofluoromethane surrogate recovery	98 %
Toluene-d8 surrogate recovery	101 %
Bromofluorobenzene surrogate recovery	96 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Veraly GAL

# CHAIN OF CUSTODY RECORD

Nº 26021 COCH 66198p



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# Robert E. Lee & Associates, Inc.

#### Engineering, Surveying, Laboratory Services

2825 S. Webster Ave. P.O. Box 2100 Green Bay, WI 54306-2100

Phone: (920) 336-6338 Fax: (920) 336-9141 E-Mail: rel@netnet.net

Milwaukee Area 830 Armour Rd. Oconomowoc, WI 53066

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Wisconsin Certification Number: 405043870

**PAUL GARVEY** STS CONSULTANTS LTD - GREEN BAY 1035 KEPLER DR **GREEN BAY WI 54311** 

Phone:

(920)468-1978

Fax:

(920)468-3312

Client ID:

000875100

Contact ID:

3487

#### Sample Information

Report Date:

7/07/1999

Chain Number: 66282

Project No:

24871XF

Project Name: MARTINIZING-1233 S MILITARY

Receive Date:

6/17/1999

Sample Date:

6/17/1999

Attest: Stu Heraf

CLIENT:

STS CONSULTANTS LTD - GREEN BAY

PROJECT:

24871XF / MARTINIZING - 1233 S MILITARY

CHAIN NUMBER:

66282

#### NARRATIVE

This narrative is relevant to sample MW-1.

The sample was analyzed for volatile organic compounds following SW-846 Method 8260.

The following is a summary of the quality control results:

- 1. The reported compounds were not detected in the method blank.
- 2. The precision between the matrix spike recovery and the matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 3. The matrix spike recovery was within laboratory limits for each of the reported compounds.
- 4. The matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 5. The surrogate recovery was within laboratory limits for each of the three surrogates spiked.
- 6. The initial and final calibration check standards verified the calibration curve for each of the reported compounds.

Steve Heraly

Laboratory Coordinator

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

**CLIENT: STS Consultants Ltd-Green Bay** 

DATE SAMPLED: June 17, 1999 DATE ANALYZED: June 26, 1999

**ANALYZED BY: JF** 

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN A LIQUID BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF/Martinizing

CHAIN NUMBER: 66282

REL NUMBER: 99REL010572

SAMPLE: MW-1 DILUTION: 1 to 500

	MDL	PQL	RESULT
ANALYTE	ug/L	ug/L	ug/L
Benzene	94.0	313	ND
Bromobenzene	169	563	ND
Bromochloromethane	83.0	277	ND
Bromodichloromethane	124	413	ND
Bromoform	225	750	ND
Bromomethane	169	563	ND
n-Butylbenzene	20.0	66.7	ND
sec-Butylbenzene	174	580	ND
tert-Butylbenzene	141	470	ND
Carbon Tetrachloride	114	380	ND
Chlorobenzene	48.0	160	ND
Chloroethane	248	827	ND
Chloroform	100	333	ND
Chloromethane	107	357	ND
2-Chlorotoluene	125	417	ND
4-Chlorotoluene	327	1090	ND
Dibromochloromethane	96.0	320	ND
1,2-Dibromo-3-Chloropropane	115	383	ND
1,2-Dibromoethane	201	670	ND
Dibromomethane	163	543	ND
1,2-Dichlorobenzene	18.0	60.0	ND
1,3-Dichlorobenzene	243	810	ND
1,4-Dichlorobenzene	226	753	ND
Dichlorodifluoromethane	137	457	ND
1,1-Dichloroethane	74.0	247	ND
1,2-Dichloroethane	175	583	ND
1,1-Dichloroethene	55.0	183	ND
cis 1,2-Dichloroethene	93.0	310	ND
trans 1,2-Dichloroethene	105	350	ND
1,2-Dichloropropane	47.0	157	ND

	MDL	POL	RESULT
ANALYTE	ug/L	ug/L	ug/L
1,3-Dichloropropane	131	437	ND
2,2-Dichloropropane	388	1290	ND
1,1-Dichloropropene	126	420	ND
cis-1,3-Dichloropropene	48.0	160	ND
trans-1,3-Dichloropropene	68.0	227	ND
Ethylbenzene	97.0	323	ND
Hexachlorobutadiene	37.0	123	ND
Isopropylbenzene	116	387	ND
p-Isopropyltoluene	62.0	207	ND
Methylene Chloride	127	423	ND
Naphthalene	41.0	137	ND
n-Propylbenzene	179	597	ND
Styrene	42.0	140	ND
1,1,1,2-Tetrachloroethane	94.0	313	ND
1,1,2,2-Tetrachioroethane	261	870	ND
Tetrachloroethene	168	560	22800
Toluene	55.0	183	ND
1,2,3-Trichlorobenzene	26.0	86.7	ND
1,2,4-Trichlorobenzene	25.0	83.3	ND
1,1,1-Trichloroethane	151	503	257 (p)
1,1,2-Trichloroethane	100	333	ND:
Trichloroethene	106	353	233 (p)
Trichlorofluoromethane	245	817	ND
1,2,3-Trichloropropane	495	1650	ND
1,2,4-Trimethylbenzene	232	773	ND
1,3,5-Trimethylbenzene	173	577	ND
Vinyl Chloride	70.0	233	ND
m&p-Xylene	196	653	ND
o-Xylene	89.0	297	ND

Dibromofluoromethane surrogate recovery	100 %
Toluene-d8 surrogate recovery	103 %
Bromofluorobenzene surrogate recovery	103 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Veraly ) a7 S

CLIENT:

STS CONSULTANTS LTD - GREEN BAY

PROJECT:

24871XF / MARTINIZING - 1233 S MILITARY

CHAIN NUMBER:

66282

#### **NARRATIVE**

This narrative is relevant to samples MW-2, MW-4 and TRIP BLANK.

The samples were analyzed for volatile organic compounds following SW-846 Method 8260.

The following is a summary of the quality control results:

- 1. The reported compounds were not detected in the method blank.
- 2. The precision between the matrix spike recovery and the matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 3. The matrix spike recovery was within laboratory limits for each of the reported compounds.
- 4. The matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 5. The surrogate recovery for all samples was within laboratory limits for each of the three surrogates spiked.
- 6. The initial and final calibration check standards verified the calibration curve for each of the reported compounds.

Steve Heraly

Laboratory Coordinator

LABORATORY SERVICES
2825 S. WEBSTER AVE. P.O. BOX 2100
GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

**CLIENT: STS Consultants Ltd-Green Bay** 

DATE SAMPLED: June 17, 1999 DATE ANALYZED: June 29, 1999

**ANALYZED BY: JF** 

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN A LIQUID BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF/Martinizing

CHAIN NUMBER: 66282

REL NUMBER: 99REL010573

SAMPLE: MW-2 DILUTION: None

	MDL	POL	RESULT
ANALYTE	ug/L	ug/L	ug/L
Benzene	0.19	0.63	ND
Bromobenzene	0.34	1.13	ND
Bromochloromethane	0.17	0.55	ND
Bromodichloromethane	0.25	0.83	ND
Bromoform	0.45	1.50	ND
Bromomethane	0.34	1.13	ND
n-Butylbenzene	0.04	0.13	ND
sec-Butylbenzene	0.35	1.16	ND
tert-Butylbenzene	0.28	0.94	ND
Carbon Tetrachloride	0.23	0.76	ND
Chlorobenzene	0.10	0.32	ND
Chloroethane	0.50	1.65	ND
Chloroform	0.20	0.67	ND
Chloromethane	0.21	0.71	ND
2-Chlorotoluene	0.25	0.83	ND
4-Chlorotoluene	0.65	2.18	ND
Dibromochloromethane	0.19	0.64	ND
1,2-Dibromo-3-Chloropropane	0.23	0.77	ND
1,2-Dibromoethane	0.40	1.34	ND
Dibromomethane	0.33	1.09	ND
1,2-Dichlorobenzene	0.04	0.12	ND
1,3-Dichlorobenzene	0.49	1.62	ND
1,4-Dichlorobenzene	0.45	1.51	ND
Dichlorodifluoromethane	0.27	0.91	ND
1,1-Dichloroethane	0.15	0.49	ND
1,2-Dichloroethane	0.35	1.17	ND
1,1-Dichloroethene	0.11	0.37	ND
cis 1,2-Dichloroethene	0.19	0.62	ND
trans 1,2-Dichloroethene	0.21	0.70	ND
1,2-Dichloropropane	0.09	0.31	ND

	200000000000000000000000000000000000000		
	MDL	PQL	RESULT
ANALYTE	ug/L	ug/L	ug/L
1,3-Dichloropropane	0.26	0.87	ND
2,2-Dichloropropane	0.78	2.59	ND
1,1-Dichloropropene	0.25	0.84	ND
cis-1,3-Dichloropropene	0.10	0.32	ND
trans-1,3-Dichloropropene	0.14	0.45	ND
Ethylbenzene	0.19	0.65	ND
Hexachlorobutadiene	0.07	0.25	ND
Isopropylbenzene	0.23	0.77	ND
p-Isopropyltoluene	0.12	0.41	ND
Methylene Chloride	0.25	0.85	ND
Naphthalene	0.08	0.27	ND
n-Propyibenzene	0.36	1.19	ND
Styrene	0.08	0.28	ND
1,1,1,2-Tetrachloroethane	0.19	0.63	ND
1,1,2,2-Tetrachloroethane	0.52	1.74	ND
Tetrachloroethene	0.34	1.12	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.05	0.17	ND
1,2,4-Trichlorobenzene	0.05	0.17	ND
1,1,1-Trichloroethane	0.30	1.01	ND
1,1,2-Trichloroethane	0.20	0.67	ND
Trichloroethene	0.21	0.71	ND
Trichlorofluoromethane	0.49	1.63	ND
1,2,3-Trichloropropane	0.99	3.30	ND
1,2,4-Trimethylbenzene	0.46	1.55	ND
1,3,5-Trimethylbenzene	0.35	1.15	ND
Vinyl Chloride	0.14	0.47	ND
m&p-Xylene	0.39	1.31	ND
o-Xylene	0.18	0.59	ND

Dibromofluoromethane surrogate recovery	94 %
Toluene-d8 surrogate recovery	90 %
Bromofluorobenzene surrogate recovery	96 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Tudy / G75

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

**CLIENT: STS Consultants Ltd-Green Bay** 

DATE SAMPLED: June 17, 1999 DATE ANALYZED: June 29, 1999

ANALYZED BY: JF

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN A LIQUID BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF/Martinizing

**CHAIN NUMBER: 66282** 

REL NUMBER: 99REL010575

SAMPLE: MW-4
DILUTION: None

	MDL	POL	RESULT
ANALYTE	ug/L	ug/L	ug/L
Benzene	0.19	0.63	ND
Bromobenzene	0.34	1.13	ND
Bromochloromethane	0.17	0.55	ND
Bromodichloromethane	0.25	0.83	ND
Bromoform	0.45		ND
Bromomethane	0.34	1.13	ND
n-Butylbenzene	0.04	0.13	ND
sec-Butylbenzene	0.35	1.16	ND
tert-Butylbenzene	0.28	0.94	ND
Carbon Tetrachloride	0.23	0.76	ND
Chlorobenzene	0.10	0.32	ND
Chloroethane	0.50	1.65	ND
Chloroform	0.20	0.67	ND
Chloromethane	0.21	0.71	ND
2-Chlorotoluene	0.25	0.83	ND
4-Chlorotoluene	0.65	2.18	ND
Dibromochloromethane	0.19	0.64	ND
1,2-Dibromo-3-Chloropropane	0.23	0.77	ND
1,2-Dibromoethane	0.40	1.34	ND
Dibromomethane	0.33	1.09	ND
1,2-Dichlorobenzene	0.04	0.12	ND
1,3-Dichlorobenzene	0.49	1.62	ND
1,4-Dichlorobenzene	0.45	1.51	ND
Dichlorodifluoromethane	0.27	0.91	ND
1,1-Dichloroethane	0.15	0.49	ND
1,2-Dichloroethane	0.35	1.17	ND
1,1-Dichloroethene	0.11	0.37	ND
cis 1,2-Dichloroethene	0.19	0.62	ND
trans 1,2-Dichloroethene	0.21	0.70	ND
1,2-Dichloropropane	0.09	0.31	ND

	MDL	POL	RESULT
ANALYTE	ug/L	ug/L	ug/L
1,3-Dichloropropane	0.26	0.87	ND
2,2-Dichloropropane	0.78	2.59	ND
1,1-Dichloropropene	0.25	0.84	ND
cis-1,3-Dichloropropene	0.10	0.32	ND
trans-1,3-Dichloropropene	0.14	0.45	ND
Ethylbenzene	0.19	0.65	ND
Hexachlorobutadiene	0.07	0.25	ND
Isopropylbenzene	0.23	0.77	ND
p-Isopropyltoluene	0.12	0.41	ND
Methylene Chloride	0.25	0.85	ND
Naphthalene	0.08	0.27	ND
n-Propylbenzene	0.36	1.19	ND
Styrene	0.08	0.28	ND
1,1,1,2-Tetrachloroethane	0.19	0.63	ND
1,1,2,2-Tetrachloroethane	0.52	1.74	ND
Tetrachloroethene	0.34	1.12	ND
Toluene	0.11	0.37	0.47
1,2,3-Trichlorobenzene	0.05	0.17	ND
1,2,4-Trichlorobenzene	0.05	0.17	ND
1,1,1-Trichloroethane	0.30	1.01	ND
1,1,2-Trichloroethane	0.20	0.67	ND
Trichloroethene	0.21	0.71	ND
Trichlorofluoromethane	0.49	1.63	ND
1,2,3-Trichloropropane	0.99	3.30	ND
1,2,4-Trimethylbenzene	0.46	1.55	ND
1,3,5-Trimethylbenzene	0.35	1.15	ND
Vinyl Chloride	0.14	0.47	ND
m&p-Xylene	0.39	1.31	ND
o-Xylene	0.18	0.59	ND

Dibromofluoromethane surrogate recovery	97 %
Toluene-d8 surrogate recovery	92 %
Bromofluorobenzene surrogate recovery	100 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Heraly 1 G75

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

**CLIENT: STS Consultants Ltd-Green Bay** 

DATE SAMPLED: June 17, 1999 DATE ANALYZED: June 29, 1999

**ANALYZED BY: JF** 

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN A LIQUID BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF/Martinizing

**CHAIN NUMBER: 66282** 

REL NUMBER: 99REL010577

SAMPLE: Trip Blank DILUTION: None

	100000000000000000000000000000000000000		
	MDL	POL	RESULT
ANALYTE	ug/L		ug/L
Benzene	0.19	0.63	ND
Bromobenzene	0.34	1.13	ND
Bromochloromethane	0.17	0.55	ND
Bromodichloromethane	0.25	0.83	ND
Bromoform	0.45	1.50	ND
Bromomethane	0.34	1.13	ND
n-Butylbenzene	0.04	0.13	ND
sec-Butylbenzene	0.35	1.16	ND
tert-Butylbenzene	0.28	0.94	ND
Carbon Tetrachloride	0.23	0.76	ND
Chlorobenzene	0.10	0.32	ND
Chloroethane	0.50	1.65	ND
Chloroform	0.20	0.67	ND
Chloromethane	0.21	0.71	ND
2-Chlorotoluene	0.25	0.83	ND
4-Chlorotoluene	0.65	2.18	ND
Dibromochloromethane	0.19	0.64	ND -
1,2-Dibromo-3-Chloropropane	0.23	0.77	ND
1,2-Dibromoethane	0.40	1.34	ND
Dibromomethane	0.33	1.09	ND
1,2-Dichlorobenzene	0.04	0.12	ND
1,3-Dichlorobenzene	0.49	1.62	ND
1,4-Dichlorobenzene	0.45	1.51	ND
Dichlorodifluoromethane	0.27	0.91	ND
1,1-Dichloroethane	0.15	0.49	ND
1,2-Dichloroethane	0.35	1.17	ND
1,1-Dichloroethene	0.11	0.37	ND
cis 1,2-Dichloroethene	0.19	0.62	ND
trans 1,2-Dichloroethene	0.21	0.70	ND
1,2-Dichloropropane	0.09	0.31	ND

	MDL	POL	RESULT
ANALYTE	ug/L	ug/L	ug/L
1,3-Dichloropropane	0.26	0.87	ND
2,2-Dichloropropane	0.78	2.59	ND
1,1-Dichloropropene	0.25	0.84	ND
cis-1,3-Dichloropropene	0.10	0.32	ND
trans-1,3-Dichloropropene	0.14	0.45	ND
Ethylbenzene	0.19	0.65	ND
Hexachlorobutadiene	0.07	0.25	ND
Isopropylbenzene	0.23	0.77	ND
p-Isopropyltoluene	0.12	0.41	ND
Methylene Chloride	0.25	0.85	ND
Naphthalene	0.08	0.27	ND
n-Propylbenzene	0.36	1.19	ND
Styrene	0.08	0.28	ND
1,1,1,2-Tetrachloroethane	0.19	0.63	ND
1,1,2,2-Tetrachloroethane	0.52	1.74	ND
Tetrachloroethene	0.34	1.12	ND
Toluene	0.11	0.37	ND
1,2,3-Trichlorobenzene	0.05	0.17	ND
1,2,4-Trichlorobenzene	0.05	0.17	ND
1,1,1-Trichloroethane	0.30	1.01	ND
1,1,2-Trichloroethane	0.20	0.67	ND
Trichloroethene	0.21	0.71	ND
Trichlorofluoromethane	0.49	1.63	ND
1,2,3-Trichloropropane	0.99	3.30	ND
1,2,4-Trimethylbenzene	0.46	1.55	ND
1,3,5-Trimethylbenzene	0.35	1.15	ND
Vinyl Chloride	0.14	0.47	ND
m&p-Xylene	0.39	1.31	ND
o-Xylene	0.18	0.59	ND

Dibromofluoromethane surrogate recovery	100 %
Toluene-d8 surrogate recovery	97 %
Bromofluorobenzene surrogate recovery	108 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Teraly / a75

CLIENT:

STS CONSULTANTS LTD - GREEN BAY

PROJECT:

24871XF / MARTINIZING - 1233 S MILITARY

CHAIN NUMBER:

66282

#### **NARRATIVE**

This narrative is relevant to samples MW-3 and PZ-1.

The samples were was analyzed for volatile organic compounds following SW-846 Method 8260.

The following is a summary of the quality control results:

- 1. The reported compounds were not detected in the method blank.
- 2. The precision between the matrix spike recovery and the matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 3. The matrix spike recovery was within laboratory limits for each of the reported compounds.
- 4. The matrix spike duplicate recovery was within laboratory limits for each of the reported compounds.
- 5. The surrogate recovery for all samples was within laboratory limits for each of the three surrogates spiked.
- 6. The initial and final calibration check standards verified the calibration curve for each of the reported compounds.

Steve Heraly

Laboratory Coordinator

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306 TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

**CLIENT: STS Consultants Ltd-Green Bay** 

DATE SAMPLED: June 17, 1999 DATE ANALYZED: June 25, 1999

**ANALYZED BY: JF** 

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN A LIQUID BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF/Martinizing

CHAIN NUMBER: 66282

REL NUMBER: 99REL010574

SAMPLE: MW-3
DILUTION: 1 to 50

	MDL	PQL	RESULT
ANALYTE	ug/L	ug/L	ug/L
Benzene	9.40	31.3	ND
Bromobenzene	16.9	56.3	ND
Bromochloromethane	8.30	27.7	ND
Bromodichloromethane	12.4	41.3	ND ·
Bromoform :	22.5	75.0	ND
Bromomethane	16.9	56.3	ND
n-Butylbenzene	2.00	6.67	ND
sec-Butylbenzene	17.4	58.0	ND
tert-Butylbenzene	14.1	47.0	ND
Carbon Tetrachloride	11.4	38.0	ND
Chlorobenzene	4.80	16.0	ND
Chloroethane	24.8	82.7	ND
Chloroform	10.0	33.3	ND
Chloromethane	10.7	35.7	ND
2-Chlorotoluene	12.5	41.7	ND
4-Chlorotoluene	32.7	109	ND
Dibromochloromethane	9.60	32.0	ND
1,2-Dibromo-3-Chloropropane	11.5	38.3	ND
1,2-Dibromoethane	20.1	67.0	ND
Dibromomethane	16.3	54.3	ND
1,2-Dichlorobenzene	1.80	6.00	ND
1,3-Dichlorobenzene	24.3	81.0	ND
1,4-Dichlorobenzene	22.6	75.3	ND
Dichlorodifluoromethane	13.7	45.7	ND
1,1-Dichloroethane	7.40	24.7	ND
1,2-Dichloroethane	17.5	58.3	ND
1,1-Dichloroethene	5.50	18.3	ND
cis 1,2-Dichloroethene	9.30	31.0	ND
trans 1,2-Dichloroethene	10.5	35.0	ND
1,2-Dichloropropane	4.70	15.7	ND

	MDL	POL	RESULT
ANALYTE	ug/L	ug/l.	ug/L
1,3-Dichloropropane	13.1	43.7	ND
2,2-Dichloropropane	38.8	129	ND
1,1-Dichloropropene	12.6	42.0	ND
cis-1,3-Dichloropropene	4.80	16.0	ND
trans-1,3-Dichloropropene	6.80	22.7	ND
Ethylbenzene	9.70	32.3	ND
Hexachlorobutadiene	3.70	12.3	ND
Isopropylbenzene	11.6	38.7	ND
p-Isopropyltoluene	6.20	20.7	ND
Methylene Chloride	12.7	42.3	ND
Naphthalene	4.10	13.7	ND
n-Propylbenzene	17.9	59.7	ND
Styrene	4.20	14.0	ND
1,1,1,2-Tetrachloroethane	9.40	31.3	ND
1,1,2,2-Tetrachloroethane	26.1	87.0	ND
Tetrachloroethene	16.8	56.0	477
Toluene	5.50	18.3	ND
1,2,3-Trichlorobenzene	2.60	8.67	ND
1,2,4-Trichlorobenzene	2.50	8.33	ND
1,1,1-Trichloroethane	15.1	50.3	ND
1,1,2-Trichloroethane	10.0	33.3	ND
Trichloroethene	10.6	35.3	ND
Trichlorofluoromethane	24.5	81.7	ND .
1,2,3-Trichloropropane	49.5	165	ND
1,2,4-Trimethylbenzene	23.2	77.3	ND
1,3,5-Trimethylbenzene	17.3	57.7	ND
Vinyl Chloride	7.00	23.3	ND
m&p-Xylene	19.6	65.3	ND
o-Xylene	8.90	29.7	ND

Dibromofluoromethane surrogate recovery	99 %
Toluene-d8 surrogate recovery	107 %
Bromofluorobenzene surrogate recovery	104 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Heraly 1927 &

LABORATORY SERVICES 2825 S. WEBSTER AVE. P.O. BOX 2100 GREEN BAY, WIS 54306

TELEPHONE NUMBER: (920) 336 - 6338

WISCONSIN CERTIFICATION NUMBER: 405043870

**CLIENT: STS Consultants Ltd-Green Bay** 

DATE SAMPLED: June 17, 1999 DATE ANALYZED: June 24, 1999

**ANALYZED BY: JF** 

METHOD 8260. VOLATILE ORGANIC COMPOUNDS IN A LIQUID BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH MASS SELECTIVE DETECTION.

PROJECT: 24871XF/Martinizing

CHAIN NUMBER: 66282

REL NUMBER: 99REL010576

SAMPLE: PZ-1
DILUTION: 1 to 5

[	MDL	POL	RESULT		
ANALYTE	ug/L	ug/L	ug/L		
Benzene	0.94	3.13	ND		
Bromobenzene	1.69	5.63	ND		
Bromochloromethane	0.83	2.77	ND		
Bromodichloromethane	1.24	4.13	ND		
Bromoform	2.25	7.50	ND		
Bromomethane	1.69	5.63	ND		
n-Butylbenzene	0.20	0.67	ND		
sec-Butylbenzene	1.74	5.80	ND		
tert-Butylbenzene	1.41	4.70	ND		
Carbon Tetrachloride	1.14	3.80	ND		
Chlorobenzene	0.48	1.60	ND		
Chloroethane	2.48	8.27	ND		
Chloroform	1.00	3.33	ND		
Chloromethane	1.07	3.57	ND		
2-Chlorotoluene	1.25	4.17	ND		
4-Chlorotoluene	3.27	10.9	ND		
Dibromochloromethane	0.96	3.20	ND		
1,2-Dibromo-3-Chloropropane	1.15	3.83	ND		
1,2-Dibromoethane	2.01	6.70	ND		
Dibromomethane	1.63	5.43	ND		
1,2-Dichlorobenzene	0.18	0.60	ND		
1,3-Dichlorobenzene	2.43	8.10	ND		
1,4-Dichlorobenzene	2.26	7.53	ND		
Dichlorodifluoromethane	1.37	4.57	ND		
1,1-Dichloroethane	0.74	2.47	ND		
1,2-Dichloroethane	1.75	5.83	ND		
1,1-Dichloroethene	0.55	1.83	ND		
cis 1,2-Dichloroethene	0.93	3.10	ND		
trans 1,2-Dichloroethene	1.05	3.50	ND		
1,2-Dichloropropane	0.47	1.57	ND .		

	MDL	POL	RESULT		
ANALYTE	ug/L	ug/L	ug/L		
1,3-Dichloropropane	1.31	4.37	ND		
2,2-Dichloropropane	3.88	12.9	ND		
1,1-Dichloropropene	1.26	4.20	ND		
cis-1,3-Dichloropropene	0.48	1.60	ND		
trans-1,3-Dichloropropene	0.68	2.27	ND		
Ethylbenzene	0.97	3.23	ND		
Hexachlorobutadiene	0.37	1.23	ND		
Isopropylbenzene	1.16	3.87	ND		
p-Isopropyltoluene	0.62	2.07	ND		
Methylene Chloride	1.27	4.23	ND		
Naphthalene	0.41	1.37	ND		
n-Propylbenzene	1.79	5.97	ND		
Styrene	0.42	1.40	ND		
1,1,1,2-Tetrachloroethane	0.94	3.13	ND		
1,1,2,2-Tetrachloroethane	2.61	8.70	ND		
Tetrachloroethene	1.68	5.60	98.3		
Toluene	0.55	1.83	ND		
1,2,3-Trichlorobenzene	0.26	0.87	ND		
1,2,4-Trichlorobenzene	0.25	0.83	ND		
1,1,1-Trichloroethane	1.51	5.03	5.04		
1,1,2-Trichloroethane	1.00	3.33	ND		
Trichloroethene	1.06	3.53	4.00		
Trichlorofluoromethane	2.45	8.17	ND		
1,2,3-Trichloropropane	4.95	16.5	ND		
1,2,4-Trimethylbenzene	2.32	7.73	ND		
1,3,5-Trimethylbenzene	1.73	5.77	ND		
Vinyl Chloride	0.70	2.33	ND		
m&p-Xylene	1.96	6.53	ND		
o-Xylene	0.89	2.97	ND		

Dibromofluoromethane surrogate recovery	110 %
Toluene-d8 surrogate recovery	113 %
Bromofluorobenzene surrogate recovery	113 %

ND = COMPOUND NOT DETECTED AT OR ABOVE MDL

MDL = METHOD DETECTION LIMIT

(p) = REPORTED RESULT IS LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL)

ATTEST Steve Teraly ) G75

# CHAIN OF CUSTODY RECORD

Nº 2602900#66282/

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Contact Person PAUL GAEVEY Phone No. 468-1978 Office GB. Project No. 24871XF PO No. Project Name MARTINIZING - 1233 S. MILITARY AUE									Speci		Rush Verbal Other		Laboratory Contact Person Phone No Results Due	REL P.K	<u></u>				
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PZ-1					*		$\coprod$					L					1057	6	
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Distribution: Original an Instructions to Laborator													S Project File			· v ~	,,,,,,,,,,		4cp10k