12-22-94

HNTB Corporation

GEOPROBES

Phase III Hazardous Materials Investigation

Susie's Restaurant Property Manitowoc, Wisconsin



December 22, 1994

DEC 3 0 1994

LMD SOLID WASTE

Mr. Robert L. Warren, P.E. HNTB Corporation 11270 West Park Place One Park Plaza, Suite 500 Milwaukee, WI 53224

RE: Phase III Hazardous Materials Investigation Results for the Susie's Restaurant Property Located Along U.S. Highway 151 in Manitowoc, Wisconsin -- STS Project No. 84526XA

Dear Mr. Warren:

STS Consultants, Ltd. (STS) has completed the GeoProbeTM subsurface exploration of the Phase III Hazardous Materials Investigation for the Susie's Restaurant property discussed in our proposal dated July 7, 1994 and revised July 22, 1994. As previously discussed, the proposed monitoring wells and piezometers have not been completed due to the uncertainty of the future progress of the roadway realignment project. The results of the GeoProbeTM exploration and soil and groundwater samples are presented in this report.

We are continuing to arrange for the disposal of one drum of soil generated from the GeoProbeTM work. Once the material has been characterized for disposal it will be removed from the property.

The results of this report should be forwarded to the Lake Michigan district of the Wisconsin Department of Natural Resources (WDNR). If needed, additional copies of the report can be made by STS.

STS appreciates the continued opportunity to work with HNTB on this project. If there are any questions in regards to the Phase III work, please do not hesitate to call.

Very truly yours,

STS CONSULTANTS, LTD.

Suzanne M. Murawski, P.E.

Project Engineer

Thomas W. Wolf, P.E.

President

Attachments

©STS Consultants, Ltd., December, 1994

m11j:84526XA/Rpt/Phase III/Susies/SMM-dc

Report	$R\epsilon$	e D	ort
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PROJECT

PHASE III HAZARDOUS MATERIALS INVESTIGATION SUSIE'S RESTAURANT PROPERTY 1020 S 26TH STREET MANITOWOC, WISCONSIN

CLIENT

MR. ROBERT L. WARRENP.E. HNTB CORPORATION 11270 WEST PARK PLACE ONE PARK PLAZA, SUITE 500 MILWAUKEE, WISCONSIN 53224

Project No. 84526XA

Date

DECEMBER 22, 1994



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PHASE III HAZARDOUS MATERIALS INVESTIGATION SUSIE'S RESTAURANT PROPERTY 1020 S 26TH STREET MANITOWOC, WISCONSIN

1.0 INTRODUCTION

A Phase III Hazardous Materials Investigation was completed by STS Consultants, Ltd. (STS) for the Susie's Restaurant property located in Manitowoc, Wisconsin as discussed in our proposal dated July 7, 1994 and revised July 22, 1994. This summary report has been prepared to present the results of the investigation and discuss the conclusions for possible additional work and remediation. A brief background summary and the proposed scope of work is discussed first before presenting the soil and groundwater results.

2.0 BACKGROUND

The Phase III investigation of Susie's Restaurant property was recommended after a Phase I and Phase II investigation of the proposed USH 151 realignment area was completed. A section of USH 151, located between 2710 Calumet Avenue and the intersection of Washington Street and South 25th Street, is part of a highway realignment project that will involve acquiring private property. Susie's Restaurant property is located on the east end of the proposed alignment area and is part of the proposed private property acquisition.

The Limited Phase I investigation completed in June of 1992 and the Additional Phase I investigation completed in September of 1993 revealed five properties along the alignment, including Susie's Restaurant, where contamination was documented in the soil or groundwater or past site activities suggested a potential for contamination to exist. The Normington's dry cleaning facility was previously located at the Susie's Restaurant property. Therefore, the potential for chlorinated solvents to reside in the soil and groundwater below the site was identified. Because of the potential contamination on the Susie's Restaurant property and several other properties along the alignment, a Phase II investigation was proposed.

The Phase II Hazardous Materials Investigation was completed by STS in February of The investigation consisted of a program of soil and groundwater sampling, laboratory analysis for suspected environmental contaminants, and conclusions regarding substances encountered. Soil samples collected from four borings on Susie's Restaurant property and groundwater samples collected from the open boreholes revealed several chlorinated solvents concentrations that would at require remediation. Tetrachloroethylene (PCE) a common dry cleaning solvent was identified on Susie's Restaurant property in addition to trichloroethylene (TCE) and cis-1,2-dichloroethylene TCE was also identified as a possible upgradient source to the proposed The direction of groundwater flow was identified to the northeast toward Lake Michigan. Because the Wisconsin Department of Transportation (WDOT) and the City of Manitowoc need to acquire Susie's Restaurant property to complete the proposed alignment, a Phase III investigation of the property was necessary to further define the extent and magnitude of contaminants on-site.

3.0 SCOPE OF WORK

As part of the Phase III Investigation, several issues needed to be further evaluated so that the City of Manitowoc and the WDOT representatives could make a final decision in regards to the acquisition of Susie's Restaurant property. The following scope of work was developed to meet this objective.

- A GeoProbeTM investigation was completed along the perimeter of the site, outside of the existing restaurant building, and along the foundation footprint of the former dry cleaners building. Soil samples were collected while advancing the GeoProbeTM for field screening proposes and possible analysis. The probes were advanced to a terminal depth that intersected the underlying clay layer. The depth from the ground surface to the clay layer was noted to evaluate the clay topography across the site. Four probes extended further into the clay to determine if the clay unit was continuous and evaluate the saturated soil thickness.
- Soil samples collected from the probes were screened in the field for volatile organic compounds using a HNu photoionization detector (PID). The sample exhibiting the highest PID reading, the sample collected from the depth of

observed groundwater, and/or the sample from the bottom of the probe were prepared for chemical analysis. Two to three soil samples from each probe were selected for chemical analysis.

- The 25 selected soil samples were analyzed for chlorinated solvents using a field gas chromatograph (GC). The chlorinated solvents included those parameters detected during the Phase II investigation (i.e., vinyl chloride, TCE, PCE and DCE).
- To confirm the field analytical results, three soil samples were collected for laboratory testing of VOCs by EPA Method 8021. The laboratory data was used to document the correlation between field GC data and laboratory results.
- Three groundwater samples were collected from the open probe holes using a peristaltic pump. The water samples were tested using the field GC for vinyl chloride, TCE, PCE and DCE.
- Three groundwater monitoring wells and two piezometers were proposed to be installed on the property to evaluate the direction of shallow groundwater movement and to determine if a perched groundwater system exists, however, the wells and piezometers were not installed because the information from the GeoProbeTM soil and groundwater testing was sufficient to show that remediation of the site would be required.
- The GeoProbeTM locations were surveyed by HNTB to document their elevation and location on the property.

The above scope of work was completed September 26 and 27, 1994. The results of the investigation activities are presented in the subsequent sections.

4.0 DISCUSSION OF RESULTS

4.1 Soil

Twelve GeoProbesTM were advanced on the subject property at the approximate locations shown on Figure 1. The GeoProbesTM extended to depths of 16 or 24 feet below the ground surface. The general soil profile consists of 0.5 feet of asphalt underlain by about 12 feet of fine to medium sand with a trace of silt. Below the sand is firm to stiff silty clay to a terminal depth of 24 feet. The clay layer appears continuous

from 12 to 24 feet below the ground surface which is to say that no sand seams or less permeable layers were observed embedded in the clay. There is a slight gradient to the clay layer from the south side of the property sloping downward towards the northeast. The depth to the clay layer in the northeast corner of the property is approximately two feet lower than the depth to clay on the south side of the site. The soil logs for the GeoProbesTM and corresponding abandonment forms are provided in the Appendix.

Soil samples were collected in the sand and clay at two foot intervals. Each soil sample was screened in the field using a HNu PID. The PID readings are recorded on the logs in the Appendix. Elevated PID readings were reported for primarily the sand samples. The clay samples did not exhibit elevated readings. The PID results were used to select the soil samples for field analysis.

Select soil samples were tested in the field for four chlorinated solvents (i.e., vinyl chloride, tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,2-dichloroethylene (DCE)) using gas chromatography (GC) methods. The field GC results are tabulated in Table 1.

In general, no contamination was detected in the clay, however, varying concentrations of DCE, TCE and PCE were observed in the sand above the clay. The contaminated sand soil appears to be concentrated on the northern one-third of the property with either no detections or lower concentrations of the chlorinated solvents on the southern portion of the site. It appears likely that the contamination has migrated off-site because the highest contaminant concentrations were observed near the perimeter of the property. However, no soil samples were collected from off-site for analysis.

Select soil samples were submitted to an independent analytical laboratory for testing of volatile organic compounds by EPA Methods 8021 which includes the contaminants of concern. The laboratory results are summarized on Table 1. Sample GP-5 S-2 did not have any reportable concentrations of chlorinated solvents based on the field GC results, and the laboratory results did not reveal any chlorinated solvents. Toluene was detected in the laboratory sample at a low concentration (0.0346 ppm). The field GC did not test for toluene. Sample GP-4 S-5 had low concentrations of DCE and TCE based on the field GC results as well as a more elevated concentration of PCE. Laboratory analysis of

a duplicate sample showed 0.5010 ppm of PCE and no detectable concentration of TCE or DCE. Sample GP-11 S-5 had a low concentration of PCE based on the field GC results, however, no chlorinated solvents were reported on the laboratory results. The low concentration of PCE from the field GC results was likely a background concentration. Several benzene type compounds were detected in sample GP-11 S-5 from the laboratory sample. These compounds are suspected to be from an off-site source. Based on the reported data there appeared to be a good correlation between the field GC results and the laboratory results.

4.2 Groundwater

Groundwater was observed above the clay layer in the sand. Approximately three feet of water was measured in the sand layer extending from approximately 9 to 12 feet below the ground surface. The clay layer at approximately 12 feet below the ground appears to act as a barrier, retarding the vertical movement of groundwater.

Groundwater samples were collected from three of the probes, GP-5, GP-9 and GP-11, for field GC analysis of PCE, TCE, DCE and vinyl chloride. The water was collected from the saturated zone in the sand above the clay. An open borehole provided access to the groundwater table. TCE, PCE and DCE were detected in the groundwater above State NR 140 standards. Therefore, the groundwater is believed to be contaminated with chlorinated solvents at concentrations that require remediation. It should be noted that NR 141 quality wells would need to be installed to confirm the field GC groundwater results. Wells and piezometers proposed for the Phase III investigation were not installed due to the uncertainty of the project continuation. If remediation of the site is initiated, these wells and piezometers should be installed to better understand the hydrogeologic conditions on-site.

A minimal amount of soil cuttings (less than one 55-gallon drum) was generated while completing the $GeoProbe^{TM}$ work. The cuttings were placed in a drum and disposal arrangements are being made.

A survey of the probe locations including elevations was completed by HNTB. Survey data is summarized on Table 2.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The sand above the clay is contaminated with chlorinated solvents that are suspected to have been deposited during the time of the dry cleaning operations. The contamination appears to be confined to the upper 12 feet of sand and has not affected the underlying clay. The extent of contamination in the soil off-site has not been defined.

Based on the available information, the recommended soil remediation is soil vapor extraction. The system could be installed in trenches below the proposed roadway within the sand and be operated after the roadway is in-place. Soil vapor extraction can be combined with air sparging to assist with remediation of the groundwater.

A three foot saturated zone was observed in the sand layer immediately above the clay. The suspected perched groundwater has been affected by chlorinated solvents above NR 140 limits. The extent of groundwater contamination off-site or vertically in the clay has not been defined. To better understand the site hydrogeologic conditions, we recommend installing NR 141 quality wells and piezometers to evaluate the groundwater contaminant concentrations in the sand and the clay. Piezometers in the clay will assist with evaluating the existence of a perched water condition above the clay layer. The additional groundwater investigation would only be necessary if the proposed Susie's Restaurant property acquisition is initiated and remediation of the site is required.

Limited soil excavation may be necessary during underground utility installation. The soil that is excavated will have several options for disposal. The excavated soil may be allowed to be placed back into the excavation if in-situ soil remediation is proposed, or the excavated soil can be treated off-site by bioremediation, thermal treatment or some other innovative method. Each option will need to be further evaluated within the overall context of the remediation scheme.

At this time, STS does not recommend additional investigation of the Susie's Restaurant property, however, if the proposed roadway realignment project is scheduled to continue, then we would recommend some additional investigation and subsequent remediation. The additional investigation would include the installation of wells and piezometers as well as defining the extent of contamination off-site. The proposed

remedial option would likely be soil vapor extraction with the possibility of air sparging. Continued remedial activities at the subject site will depend upon the future actions of the WDOT and City of Manitowoc.

APPENDICES

Figure 1 - Boring and GeoProbeTM Locations

Table 1 - Soil and Groundwater Results

Table 2 - GeoProbeTM Survey Information

Boring Logs

Borehole Abandonment Forms

GZA GeoEnvironmental, Inc. In-Field Analytical Survey Results

Environscan Analytical Results

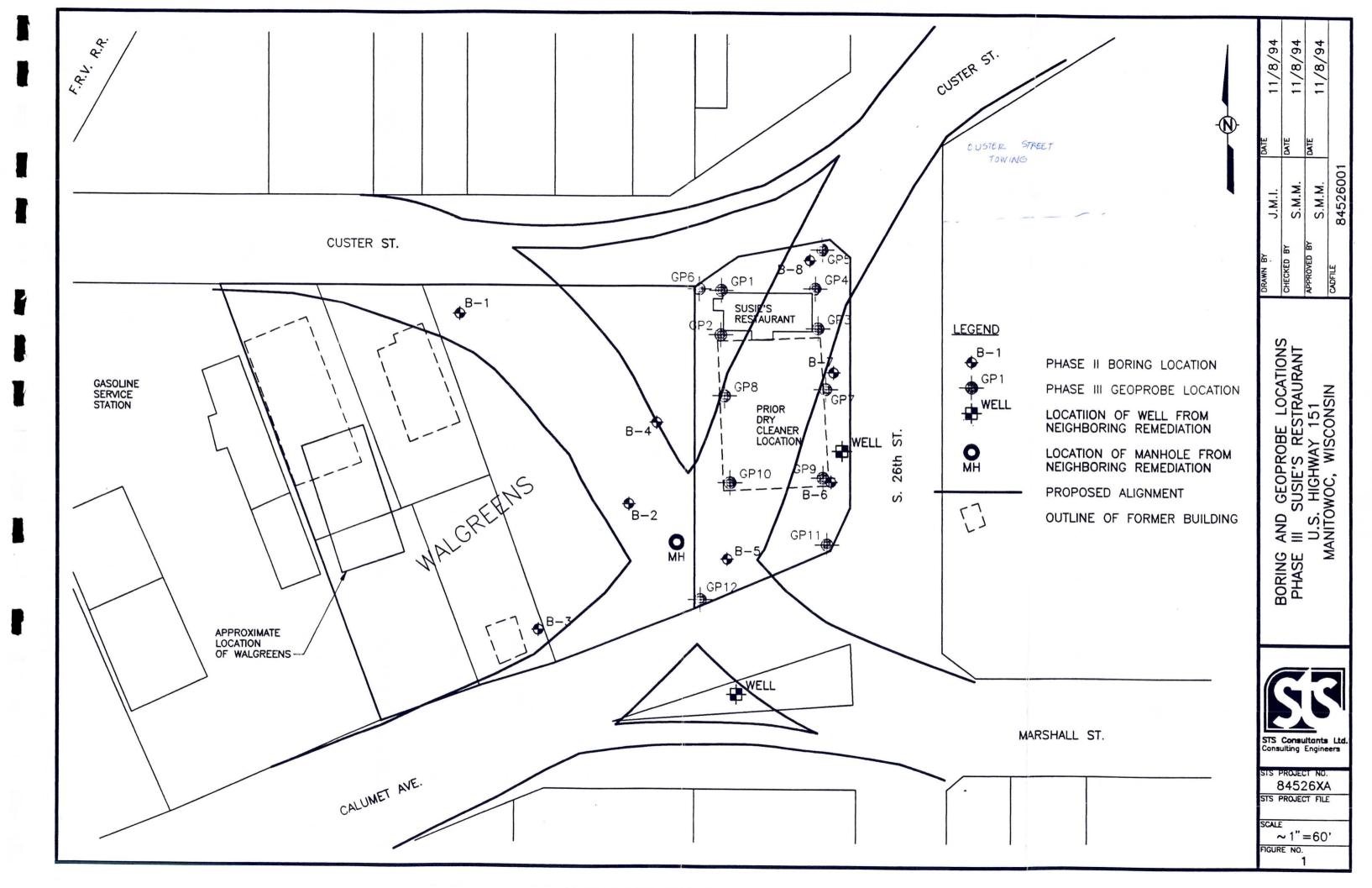


Table 1 Analytical Data Soil and Groundwater Results Susie's Restaurant - USH 151 Manitowoc, Wisconsin

•		I	SOIL RES	SULTS	
	Depth (ft.)/	Field	GC Results - Co	ncentration (ppb)
Sample	Soil Type	Vinyl-cl	DCE	TCE	PCE
GP-1	4-6/Sand	ND	ND	ND	47
GP-1	10-12/Sand	ND	42	28	<2
GP-2	4-6/Sand	ND	ND	5	326
GP-2	8-10/Sand	ND	21	15	<2
GP-2	14-16/Clay	ND	ND	ND	<2
GP-3	2-4/Sand	ND	ND	8	148
GP-3	22-24/Clay	ND	ND	ND	<2
GP-4	8-10/Sand	ND	18	18	134
GP-4	14-16/Clay	ND	ND	ND	<2
GP-5	8-10//Sand	ND	ND	6	129
GP-5	22-24/Clay	ND	ND	ND	<2
GP-6	6-8/Sand	ND	ND	ND	4
GP-6	14-16/Clay	ND	ND	ND	<2
GP-7	0-2/Sand	ND	ND	ND	97
GP-7	14-16/Clay	ND	ND	ND	<2
GP-8	8-10/Sand	ND	ND	13	<2
GP-8	8-10/Sand*	ND	ND	13	<2
GP-8	14-16/Clay	ND	ND	ND	<2
GP-9	10-12/Sand	ND	ND	ND	<2
GP-9	14-16/Clay	ND	ND	ND	<2
GP-10	2-4/Sand	ND	ND	ND	124
GP-10	2-4/Sand*	ND	ND	ND	147
GP-10	22-24/Clay	ND	ND	ND	<2
GP-11	8-10/Sand	ND	ND	ND	3
GP-11	8-10/Sand*	ND	ND	ND	6
GP-11	22-24/Clay	ND	ND	ND	ND
GP-12	8-10/Sand	ND	ND	ND	ND
GP-12	14-16/Clay	ND	ND	ND	ND

Analytical Laboratory Results Soil Results

 Sample	Depth (ft.)/ Soil Type	VOCs (Method 8021)
GP-5 S-12 GP-4 S-5 GP-11 S-5	22-24/Clay 8-10/Sand 8-10/Sand	Toluene 0.0346 ppm PCE 0.5010 ppm n-Butylbenzene 3.96 ppm Isopropylbenzene 0.70 ppm Naphthalene 1.53 ppm 1.2.4-Trimethylbenzene 5.16 ppm

Groundwater Results

Field GC Results concentrations (ppb)

Sample	Vinyl-cl	DCE	TCE	PCE
GP-5	ND	26	30	28
GP-9	ND	133	<2	<2 <2
GP-11	ND	ND	2	<2
ES	0.2	70	5	5
PAL	0.02	7	0.5	0.5

Notes:

Vinyl-cl = Vinyl Chloride

ND = Not Detected

DCE = Dichloroethylene

PAL = NR 140 Preventive Action Limit

TCE = Trichloroethylene

ES = NR 140 Enforcement Standard

PCE = Tetrachloroethylene

* = Duplicate

Only detected parameters from the VOC scan are presented in the table.

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11	24		E.	Silty clay, trace brown-moist-stif		nd~rec	tdish	CL			<1	1.5	_				
12	24		= 22.								<1	1.25	ļ				
			-25 -27 -27	Boring advanced Boring backfilled	to 24.0 feet by (with bentonite cr	nips.											
I heri Signa		rtify y	nat th	e information on this i	orm is true and c	orrect	to the					 .		,			
Jigna		41		<u>Jawsli</u> Dy Chapters 144.147 a											41		

or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Route To:

≡ate of Wisconsin

■ epar	tment	of Na	etural I	Reso	0 En	olid Waste nergency Respon nstewater	ise [Haz. I Under Water Other	ground Resou		3		Fo	rm 44	00-1		3 45 26>	
Facili	y/Proj	ect Na	ame					·		mit/Mor	nitorino	Numbe	er	Boring	Numb	er		Page 1 of
			'Susie's	Resi	taurant									GP-6				
	GeoEnv		(Firm na ental In		nd name of crew	chief)		Date 09/20		Starte	ed	Date (1)	Orilling 1/94	Comple	ted	Orilling Geopro		
DNR F	acility	Well N	lo. Wi	Uniq	ue Well No.	Common Well Na	me	Water 8 Fee	Level		-		e Elev Feet A			Boreho 2 inche		eter
State			of Sect	ion 2	5. T 19 N, R 23 E			Grid of Lat Long	of Origi	n		Local Feet		cation		oplicable Feet W	2)	
Count Manite	y owoc C	ounty		-			ONR (County	Code	Civil To Manıto		ty/ or lisconsi	_					
Sar	nple									1					_	erties		
Number	Length Recovered (in)	Blow Counts	Depth in Feet		And Ge	ock Description ologic Origin For ch Major Unit			nscs	Graphic Log	Well	P10/) 10	Compressive Strength	Moisture Content	Liquid	Plastic Limit	P 200	RQD/ Comments
1	10			C	ill: topsoil, silty co parse sand, gras	=			CL			<1						
2			-2.5	_	rown-moist o recovery													
3	7		5	4	ine to medium sar ravel, trace silt, l			•	SP			<1						
4	12		E _{7.5}	10	rown-moist ine to medium sai	·						<1						
5	12		E		rown-moist to we				SP			<1						
6	17		E									<1						
7	14		12.5	1 -	ilty clay, trace fi rown-moist-stiff		nd-red	ldish	CL			<1	2.25					
8	12		-15									<1	1.0					
			F17.5		ND OF BORING													
			20	1	loring advanced i loring backfilled i	•		e.										
			= 22. = -	5														
			- 25 - -															
			— 27. —	5												į		
		rtify	that the	e into	ermation on this f	orm is true and c	orrect		Dest o	f my kr	owied	ge.	1		<u> </u>			
Signa	ature	S	Me	<u>1</u> 2	rwski_			Firm	Si	rs	Co	nsc) 1 to	an+	<u>S</u>	Lta	/	
than	\$10 no	r more	e than :	5,00	apters 144,147 ar 10 for each violat ach day of conti	ion. Fined not le	ess tha	in \$10 c	r more	than \$	100 or	IMPLISO	ned no	ot less	than .	30 days		

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Route To:

☐ Emergency Response □ Underground Tanks 84526XA Mastewater Water Resources Other: Page 1 of 1 Facility/Project Name License/Permit/Monitoring Number Boring Number USH 151 Phase III/Susie's Restaurant GP-7 Boring Orilled By (Firm name and name of crew chief) Date Drilling Completed Date Drilling Started **Drilling Method** GZA GeoEnvironmental Inc. 09/27/94 09/27/94 Geoprobe B. Weh Water Level Surface Elevation DNR Facility Well No. WI Unique Well No. Common Well Name Borehole Diameter 9.5 Feet 195.51 Feet MSL 2 inches **Boring Location** Grid of Origin Local Grid Location (if applicable) State Plane Lat Feet S Feet N NE 1/4 of SE 1/4 of Section 25, T 19 N, R 23 E Long County **DNR County Code** Civil Town/City/ or Village Manitowoc County Manitowoc, Wisconsin Sample Soil Properties in Feet 3 Compressive Strength Blow Counts Soil/Rock Description Length Recovered RQD/ Comments And Geologic Origin For Well Diagram PID/FID Moisture Content Graphic Log Number Depth Plastic Limit Each Major Unit Liquid Limit nscs Driller's Note: Base coarse, gravel 12 Fill: Silty fine to coarse sand, trace fine SP - 2.5 to medium gravel, some clay at 2 to 4 feet-2 12 2 dark brown to black-moist Fine to medium sand, trace silt, trace clay 3 12 5 2 8 to 10 feet, trace fine to coarse gravelreddish brown-moist to wet at 9.5 feet 4 24 4 -7.5 SP 5 12 <1 10 6 8 <1 12.5 Silty clay, trace fine to coarse sand-reddish 7 1.75 24 <1 brown-moist-firm to stiff CL 8 24 - 15 <1 .50 END OF BORING 17.5 Boring advanced to 16.0 feet by Geoprobe. Boring backfilled with bentonite chips. 20 22.5 25 27.5 I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature STS Consultants Ltd. This form is authorized by Chapters 144,147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days,

or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

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epartment of Natural Resources

Route To:

☐ Solid Waste

SOIL BORING LOG INFORMATION

Form 4400-122

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Facilit	y/Proje	ect Na	ame		·				mit/Mor	nitoring	Numbe	er	Boring	Numb	er		Page 1 of
ı	-			Restaurant									GP-8				
	BeoEnvi			me and name of crew c.	chief)		09/26	_	Starte	đ	Date 0 09/26		Comple	ted	Drilling (Geopro		
DNR F	acility	Well N	o. WI	Unique Well No.	Common Well Na	ame	Water 9 Fee	Level t	***************************************		Surfac 195.70	e Eleva Feet I			Borehol		ter
State	_		f Sect	ion 25, T 19 N, R 23 E			Grid o Lat Long	f Origi	n		Local (Feet		cation		pplicable Feet W	·)	
Count Manito	y owoc Co	ounty				DNR (County	Code	Civil To Manito			-					
San	nple				-									Prop	erties		
Number	Length Recovered (in)	Blow Counts	Depth in Feet	And Ge	ock Description ologic Origin For th Major Unit			SOSO	Graphic Log	well Diagram	PID) TID	Compressive Strength	Moisture Content	Liquid	Plastic Limit	P 200	RGD/ Comments
1	12			Fill: Fine to coarse coarse sand-gray		ne to		GP			<1						
2	12		2.5	Fill: Silty fine to co				SM			<1		٠				
3	24		5	Fine to medium san	nd, trace silt, tra	ice fine	 •				<1						
4	18		7.5	to medium gravel-r at 9 feet	eddish brown-m	oist to	wet	SP			<1						
5	12		E ₁₀					0.			<1						
6	12		E			··					<1						
7	12		<u></u>	Silty clay, trace fi brown-moist-firm	ne to coarse sa	nd-rec	fdish	CL			<1	.50					
8	12		<u></u>	·							<1	1.0					
I her		rtify t	20	Boring advanced t Boring backfilled w	vith bentonite ch	nips.		best o	f my kr	owled	ge.						
		autho	tized h	Chapters 144.147 an	nd 162. Wis Stat	s. Com			TS report		ON SC				LHJ	.s	
than	\$10 no	r more	than S	55,000 for each violat n. Each day of contir	ion. Fined not le	ess tha	n \$10 o	r more	than \$	100 or	impriso	ned no	t less	than	30 days,	•	

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Route To:

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<u> </u>	ty/Proje		·-· · · · · · · · · · · · · · · · · · ·					Other										Page 1 of
				's R	Restaurant			Licen	se/Per	mit/Mor	nitoring	Numbe	er .	Boring GP-9	Numb	er		
	- GeoEnvi	-			e and name of crew	chief)		Date 09/27	-	Starte	d	Date 0 09/27	_	Comple	ted	Drilling Geopra		
ONR F	acility	Well N	o. h	II U	Jnique Well No.	Common Well Na	me	Water 9.5 F	Level eet			Surfac 195.48				Boreho		eter
State	Locat Plane 4 of SE		of Sec	tio	n 25, T 19 N, R 23 E			Grid o	of Origi	n		Local (Feet		cation		oplicable Feet W	e)	
Count Manit	y owoc Co	ounty			·		DNR (Code			ty/ or \ lisconsii	_					
Sa	mple			Τ			<u>L </u>							Soil	Prop	erties	· ·	
Number	Length Recovered (in)	Blow Counts	Depth in Feet		And Ge	ock Description ologic Origin For h Major Unit			nscs	Graphic Log	Well Diagram	P10/F10	Compressive Strength	Moisture Content	Liquid	Plastic Limit	P 200	RQD/ Comments
1	22		E	-	Oriller's Note: Fill: gravel			Γ				<1						
2	24		-2.5 -	5	Fill: Silty fine to co				SM			<1						
3	24		E ₅									<1					1	
4	24		Ē7.9	5	Fine to medium san to coarse gravel-r at 9.5 feet	•						<1						
5	24		<u> </u>						SP			2.0						
6	12		Ē									<1						
7	24		— 12. —	.5	Silty clay, trace fil brown-moist	ne to coarse sar	nd-red	ldish	CL			<1	1.0					
8	24		<u> </u> 15									<1	1.5					
			20	2.5	END OF BORING Boring advanced t Boring backfilled w	•	e.											
i her	PDV CP	rtify t		7.5	information on this fo	irm is true and c	Orrect	to the	hest o	f my kn	Owled	OP.		i i				
7	ature	1	· //	lu	saw Li	is true and ci		Firm		STS		Con	sul	tan	ts	Lt	 d.	
than	\$10 no	r more	than	\$5	Chapters 144,147 an i,000 for each violati Each day of contin	on. Fined not le	ss tha	n \$10 o	r more	than \$	100 or	impriso	ned no	ot less	than:	30 days		

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Route To:

Solid Waste

SOIL BORING LOG INFORMATION

Form 4400-122

Form 4400-122 ☐ Underground Tanks ☐ Emergency Response 84526XA Wastewater ■ Water Resources Other: Page 1 of 1 Facility/Project Name License/Permit/Monitoring Number **Boring Number** USH 151 Phase III/Susie's Restaurant GP-10 Boring Orilled By (Firm name and name of crew chief) Date Drilling Started Date Orilling Completed **Drilling Method** 09/27/94 09/27/94 -GZA GeoEnvironmental Inc. Geoprobe B. Weh Surface Elevation WI Unique Well No. Common Well Name Water Level DNR Facility Well No. **Borehole Diameter** 8.5 Feet 195.67 Feet MSL 2 inches Grid of Origin Local Grid Location (if applicable) **Boring Location** State Plane Lat Feet S Feet W NE 1/4 of SE 1/4 of Section 25, T 19 N, R 23 E Long Civil Town/City/ or Village County DNR County Code Manitowoc County Manitowoc, Wisconsin Sample Soil Properties Compressive Strength Ξ Soil/Rock Description Blow Counts Length Recovered RQD/ Comments And Geologic Origin For Moisture Content .⊆ well Diagram PID/FID Graphic Depth i Number Each Major Unit Plastic Limit Liquid Limit nscs 200 Fill: Gravel and silty sand 17 GP <1 -2.5 Fill: Silty fine to coarse sand, trace fine 2 12 2.0 to coarse gravel, trace clay, trace organics-SM dark brown to black-moist 3 -5 12 1.4 Fine to coarse sand, trace to little gravel, 4 17 <1 7.5 occasional silt seams-brown-moist to wet at 11.5 feet 5 12 <1 SP 10 6 12 <1 12.5 Silty clay, trace fine to coarse sand, trace 7 <1 2.0 24 fine to coarse gravel-reddish brown-moistvery stiff 8 24 15 <1 2.5 CL 9 <1 2.75 24 -17.5 No recovery 10 20 Silty clay, trace fine to medium sand-reddish 11 24 <1 3.0 brown-moist-stiff to very stiff CL 22.5 1.75 12 <1 24 END OF BORING -25 Boring advanced to 24.0 feet by Geoprobe. Boring backfilled with bentonite chips. 27.5 I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Consultants This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

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· Route To: O Solid Waste

SOIL BORING LOG INFORMATION tate of Wisconsin Route To: ☐ Solid Waste O Haz. Waste ■epartment of Natural Resources Form 4400-122 Underground Tanks ☐ Emergency Response 84526XA Wastewater Water Resources Other: Page 1 of 1 ‡acility/Project Name License/Permit/Monitoring Number **Boring Number** USH 151 Phase III/Susie's Restaurant GP-11 Boring Drilled By (Firm name and name of crew chief) Date Orilling Completed Date Drilling Started **Drilling Method** SZA GeoEnvironmental Inc. 09/27/94 09/27/94 Geoprobe B. Weh DNR Facility Well No. WI Unique Well No. Water Level **Surface Elevation** Common Well Name **Borehole Diameter** 10 Feet 195.48 Feet MSL 2 inches Grid of Origin Local Grid Location (if applicable) **Boring Location** State Plane Feet S Feet N Lat NE 1/4 of SE 1/4 of Section 25. T 19 N. R 23 E Long County **DNR** County Code Civil Town/City/ or Village Manitowoc County Manitowoc, Wisconsin Sample Soil Properties 3 Compressive Strength Blow Counts Soil/Rock Description Length Recovered in Fe RQD/ Comments Moisture Content And Geologic Origin For well Diagram P10/F10 Graphic Log Depth i Plastic Limit Number Each Major Unit Liquid Limit nscs 200 Fill: Silty fine to coarse sand with some 8 <1 fine to coarse gravel-brown-moist SM -2.5 2 5 <1 E⁵ Fine to coarse sand, trace sitt, trace fine <1 3 18 to coarse gravel at 8 to 10 feet-reddish brown-moist to wet at 10 feet 4 24 <1 7.5 (Driller's Note: sand seam at 9.5 to 10.0 SP feet) PID = 1805 180 17 10 6 <1 12 -12.5 Silty clay, trace fine to coarse sand, trace 7 <1 1.5 24 fine to coarse gravel-reddish brown-moistsoft to hard - 15 .25 8 24 <1 9 <1 2.75 24 -17.5 CL 10 <1 1.0 24 20 11 <1 4.25 24 22.5 <1 12 1.0 END OF BORING 25 Boring advanced to 24.0 feet by Geoprobe. Boring backfilled with bentonite chips. 27.5 I hereby certify that the information on this form is true and correct to the best of my knowledge. Firm Signature Consultants Ltd.

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

☐ Emergency Response ☐ Underground Tanks 84526XA ■ Wastewater Water Resources Other: Page 1 of 1 Facility/Project Name License/Permit/Monitoring Number **Boring Number** USH 151 Phase III/Susie's Restaurant GP-12 Boring Orilled By (Firm name and name of crew chief) Date Orilling Completed Date Drilling Started **Drilling Method** 09/27/94 -GZA GeoEnvironmental Inc. 09/27/94 Geoprobe B. Weh DNR Facility Well No. WI Unique Well No. Water Level Surface Elevation Common Well Name **Borehole Diameter** 195.57 Feet MSL 9.5 Feet 2 inches Grid of Origin Local Grid Location (if applicable) **Boring Location** State Plane Lat Feet S Feet N NE 1/4 of SE 1/4 of Section 25, T 19 N, R 23 E Long Civil Town/City/ or Village **DNR County Code** County Manitowoc County Manitowoc, Wisconsin Sample Soil Properties Feet 3 Compressive Strength Soil/Rock Description Blow Counts Recovered RQD/ Comments And Geologic Origin For Moisture Content .⊆ well Diagram Graphic Log Length Number Each Major Unit PIO/FI Plastic Limit Depth Liquid Limit 200 **Driller's Note: Topsoil** 24 <1 1 Fill: Silty fine to coarse sand, trace fine 2.5 SM to coarse gravel, trace wood pieces, trace 2 <1 24 organics-brown with little black-moist Fine to coarse sand, trace silt, trace fine -5 3 17 <1 to coarse gravel-reddish brown-moist to wet at 9.5 feet 20 <1 4 7.5 SP 5 12 <1 10 6 <1 12 12.5 Silty clay, trace fine to coarse sand-reddish 7 12 <1 1.25 brown-moist-stiff CL 8 15 <1 1.50 END OF BORING -17.5 Boring advanced to 16.0 feet by Geoprobe. Boring backfilled with bentonite chips. -20 -22.5 -27.5 I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Consultants STS This form is authorized by Chapters 144,147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days,

or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

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Route To:

Solid Waste

SOIL BORING LOG INFORMATION

Form 4400-122

All abandonment work shall be per dmin. Code, whichever is applica			s of Chapt	ers NR 111, i	NR 112 or NR 141, Wis.					
(I) GENERAL INFORMATION		(2) FACIL	ITY NAME							
والتناوي والمراوي والمراوية والمراوي	Manitowoc	Onginal Well Owner (If Known)								
NE 1/4 of SE 1/4 of Sec. 25	: T. 19 N. R. 23 N. W		Well Owner							
(If applicable) Gov't Lot	Grid Number		r Route		·					
Grid Location		City, S	tate, Zip Cod	le						
ft. N. S.,	ft.	Facility		/or Name (II App	plicable) WI Unique Well No.					
Manitowoc Street Address of Well		GP								
1020 8.26th Str	eet	B	borchole	•						
City, Village Manitowoc		Date of	Abandonmen							
WELL/DRILLHOLE/BOREHOLE I		<u>*</u>								
) Original Well/Drillhole/Borehole Con		(4) Depth to	o Water (Feel	9						
(Date) 9/26/94	onstruction Report Available? Yes No	Pump & Liner(s) Screen F	Piping Rem Removed? Removed? Left in Place?	oved?	Yes No Not Applicable Yes No Not Applicable Yes No Not Applicable Yes No Not Applicable Yes No					
Construction Type: Drilled Driven (Sa	Was Casing Cut Off Below Surface? Yes No Did Sealing Material Rise to Surface? Yes No Did Material Settle After 24 Hours? Yes No If Yes, Was Hole Retopped? Yes No (5) Required Method of Placing Sealing Material									
Formation Type: Unconsolidated Formation	☐ Bedrock	∑ Cond	tuctor Pipe-G p Bailer	ravity C	onductor Pipe-Pumped Other (Explain)					
Total Well Depth (ft.) 6 Cas (From groundsurface)	ing Diameter (ins.) 2	(6) Sealing Materials For monitoring wells and Neat Cement Grout monitoring well boreholes only								
Casing Depth (ft.)		Sand-Cement (Concrete) Grout Concrete Bentonite Pellets								
Was Well Annular Space Grouted? If Yes, To What Depth?	☐ Clay-Sand Shurry ☐ Granular Bentomite ☐ Bentonite-Sand Shurry ☐ Bentomite - Cement Grout ☐ Chipped Bentonite									
7) Sealing Material	Used	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight					
Bentonite Chips		Surface	16							
Borehole.										
9) Name of Person or Firm Doing Sealing		(10)	FOR	DNR OR CO	UNTY USE ONLY					
GZA Environment		Date	Received/Insp	ected	District/County					
B. Weh Street or Route	Telephone Number	Revie	wer/Inspector	7						
W255 N4/40 Duplainuille City, State, Zip Code	(414)691-2662	Follo	w-up Necessa	пу						
Milwaukee WI	<u> </u>									

All abandonment work shall be performed in accordance with the American Code, whichever is applicable. Also, see instructions or									
GENERAL INFORMATION	(2) FACILITY NAME								
Well/Drillhole/Borehole County Location Manitowac	Onginal Well Owner (If Known)								
VE 1/4 of SE 1/4 of Sec. 25; T. 19 N. R. 23 W	Present Well Owner								
(If applicable) Gov't Lot Grid Number	Street or Route								
Grid Location ft.	City, State, Zip Code								
Civil Town Name Manitowoc	Facility Well No. and/or Name (If Applicable) WI Unique Well No. GP-2								
Street Address of Well 1020 S. 26th Street	Reason For Abandonment Borehole								
City, Village	Date of Abandonment								
Manitowoc WELL/DRILLHOLE/BOREHOLE INFORMATION	9/26/94								
Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet) 9								
(Date) 9 26 94	Pump & Piping Removed? Yes No Not Applicable								
Monitoring Well Construction Report Available?	Liner(s) Removed? Screen Removed? Yes No Not Applicable Yes No Not Applicable								
☐ Water Well No	Casing Left in Place? Yes No								
☐ Drillhole	If No, Explain								
⊠ Borehole									
Communica Time	Was Casing Cut Off Below Surface? Yes No Did Sealing Material Rise to Surface? Yes No								
Construction Type: Driven (Sandmoint) Dug	Did Sealing Material Rise to Surface? Yes No Did Material Settle After 24 Hours? Yes No If Yes, Was Hole Retopped? Yes No								
Other (Specify)									
Formation Type:	(5) Required Method of Placing Sealing Material								
Unconsolidated Formation Bedrock	Conductor Pipe-Gravity Conductor Pipe-Pumped Dump Bailer Other (Explain)								
Total Well Depth (ft.) 16 Casing Diameter (ins.) 2 (From groundsurface)	(6) Sealing Materials For monitoring wells and Neat Cement Grout monitoring well boreholes only								
Casing Depth (ft.)	Sanci-Cernent (Concrete) Grout Concrete Bentonite Pellets								
•	Clay-Sand Shury Granular Beniomite								
Was Well Annular Space Grouted? Yes No Unknown If Yes, To What Depth? Feet	Bentonite-Sand Slurry Bentonite - Cement Grout Chipped Bentonite								
Sealing Material Used	From (FL) To (FL) Sacks Sealant or Volume Mix Ratio or Mud Weight								
Bentonite Chips	Surface 16								
· · · · · · · · · · · · · · · · · · ·									
Comments: Borehole									
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY								
GZA Environmental Inc.	Date Received/Inspected District/County								
Signature of Person Doing Work Date Signed									
B. Weh	Reviewer/Inspector								
Street or Route Telephone Number 1255 N 4140 Duplainville (414) 691-2662	Follow-up Necessary								
City, State, Zip Code	1 Ollow-up Incomery								
Pewaukee WI 53072									

Pewaukee

WI.

53072

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 8-89

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. pmin. Code, whichever is applicable. Also, see instructions on back. GENERAL INFORMATION (2) FACILITY NAME Onginal Well Owner (li Known) Contro Well/Drillhole/Borehole Location Manitowoc Present Well Owner **A** E NE 1/4 of SE 1/4 of Sec. 25 : T. 19 N. R. 23 (If applicable) Street or Route Gov't Lot **Grid Number Grid Location** City, State, Zip Code ft. 🔲 E. 🗍 W. Facility Well No. and/or Name (If Applicable) Civil Town Name WI Unique Well No. Manitowoc Street Address of Well Reason For Abandonment 1020 S. 26th Street Borehole City, Village Date of Abandonment 9/26/94 Manitowoc VELL/DRILLHOLE/BOREHOLE INFORMATION Original Well/Drillhole/Borehole Construction Completed On (4) Deput to Water (Feet) 9/26/94 Pump & Piping Removed? ☐ Yes ☐ No 🔀 Not Applicable (Date) Liner(s) Removed? Yes No Not Applicable Screen Removed? Not Applicable Construction Report Available? Yes ☐ Water Well XX Yes □ No Casing Left in Place? Yes No Drillhole If No. Explain Borehole Was Casing Cut Off Below Surface? Yes No Did Sealing Material Rise to Surface? Construction Type: Yes 🔲 No Drilled ☐ Dug Did Material Settle After 24 Hours? Yes | No Driven (Sandpoint) If Yes, Was Hole Retopped? Yes | No Other (Specify) (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Pumped Conductor Pipe Gravity Unconsolidated Formation ☐ Bedrock Dunno Bailer Other (Explain) Total Well Depth (ft.) 24 Casing Diameter (ins.) 2 (6) Sealing Materials For monitoring wells and (From groundsurface) Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout Concrete Casing Depth (ft.) Bentonite Pellets Clay-Sand Shurry Granular Benionite Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown Bentonite-Sand Slurry Bentonite - Cement Grout If Yes, To What Depth? Chipped Bentonite Feet No. Yards, Sacks Sealant Mix Ratio or Mud Weight Sealing Material Used To (FL) From (Ft.) or Volume Bentonite Surface 24 Chips Comments: Borehole Name of Person or Firm Doing Sealing Work FOR DNR OR COUNTY USE ONLY District/County Date Received/Inspected GZA Environmental Inc. Signature of Person Doing Work Date Signed B. Weh Reviewer/Inspector Street or Route Telephone Number .55N4140 Duplainville (414) 691-2662 Follow-up Necessary City, State, Zip Code

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WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back. I) GENERAL INFORMATION (2) FACILITY NAME Onginal Well Owner (If Known) County Well/Drillhole/Borehole Location Manitowoc Present Well Owner N E NE 1/4 of SE 1/4 of Sec. 25 : T. 19 N. R. 23 (If applicable) Street or Rouse Gov't Lot Grid Number Grid Location City, State, Zip Code ft. ☐ N. ☐ S.. ft. | E. | W. Facility Well No. and/or Name (If Applicable) Civil Town Name WI Unique Well No. Manitowoc Street Address of Well Reason For Abandonment 8. 26th Street 1020 Borehole City, Village Date of Abandonment 9/26/94 Manitowoc VELL/DRILLHOLE/BOREHOLE INFORMATION Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) 9/26/94 Pump & Piping Removed? Yes No No Not Applicable (Date) Liner(s) Removed? Yes No Not Applicable Screen Removed? Monitoring Well Construction Report Available? Yes Not Applicable ☐ Water Well Casing Left in Place? Yes ☑ Yes ☐ No Drillhole If No, Explain Borehole Was Casing Cut Off Below Surface? Yes No Construction Type: Did Sealing Material Rise to Surface? Yes 🔲 No Drilled ☐ Dug Did Material Settle After 24 Hours? Yes | No Driven (Sandpoint) If Yes, Was Hole Retopped? Other (Specify) Yes No (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped Unconsolidated Formation ☐ Bedrock Dump Bailer Other (Explain) Total Well Depth (ft.) Casing Diameter (ins.) 2. (6) Sealing Materials For monitoring wells and monitoring well boreholes only (From groundsurface) Neat Cement Grout Sand-Cement (Concrete) Grout Concrete Casing Depth (ft.) Bentonite Pellets Clay-Sand Sharry Granular Bentonite Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown Bentonite-Sand Slurry Bentonite - Cement Grout If Yes, To What Depth? Feet Chipped Bentonite No. Yards, Sacks Sealant Sealing Material Used Mix Ratio or Mud Weight From (Ft.) To (FL) or Volume Surface Bentonite Chips ماا Comments: Borehole FOR DNR OR COUNTY USE ONLY Name of Person or Firm Doing Sealing Work Date Received/Inspected District/County GZA Environmental Inc.Date Signed Signature of Person Doing Work Reviewer/Inspector B. Weh Street or Route Telephone Number (414) 691-2662 55 N4140 Ouplainville Follow-up Necessary City, State, Zip Code Pewaukee 53072

All abandonment work shall be performed in accordance with the Admin. Code, whichever is applicable. Also, see instructions or	n back.								
) GENERAL INFORMATION	(2) FACILITY NAME								
Well/Drillhole/Borehole County Location Manitowoc	Onginal Well Owner (If Known)								
NE 1/4 of SE 1/4 of Sec. 25 : T. 19 N. R. 23 W	Present Well Owner								
(If applicable)	Street or Route								
Grid Location Grid Number	City, State, Zip Code								
ft.									
Civil Town Name Manitowac	Facility Well No. and/or Name (II Applicable) WI Unique Well No.								
Street Address of Well	Reason For Abandonment								
1020 3.26th Street	Borehole Date of Abandonment								
Manitowoc	9/26/94								
WELL/DRILLHOLE/BOREHOLE INFORMATION									
Original Well/Drillhole/Borehole Construction Completed On (Date) 9/216/94	(4) Depth to Water (Feet) 9 Pump & Piping Removed? Yes No Not Applicable								
$\frac{9 26 94}{}$	Pump & Piping Removed? Yes No Not Applicable Lincr(s) Removed? Yes No Not Applicable								
Monitoring Well Construction Report Available?	Screen Removed? Yes No Not Applicable								
☐ Water Well	Casing Left in Place? Yes No								
☐ Drillhole ☐ Borehole	If No, Explain								
Mark boundary	Was Casing Cut Off Below Surface?								
Construction Type:	Did Sealing Material Rise to Surface? Yes No								
Drilled Driven (Sandpoint) Dug Other (Specify)	Did Material Settle After 24 Hours? Yes No If Yes, Was Hole Retopped? Yes No								
	(5) Required Method of Placing Sealing Material								
Formation Type:	Conductor Pipe-Gravity Conductor Pipe-Pumped								
IX 1 LINCONCOLLOSIAN HORROLLOSIA I 1 Declarado									
Unconsolidated Formation Bedrock	Dump Bailer Other (Explain)								
Total Well Depth (ft.) 24 Casing Diameter (ins.) 2	(6) Sealing Materials For monitoring wells and								
Total Well Depth (ft.) 24 Casing Diameter (ins.) 2. (From groundsurface)	(6) Sealing Materials For monitoring wells and Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout								
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Total Well Depth (ft.) 24 Casing Diameter (ins.) 2. (From groundsurface)	(6) Sealing Materials Neat Cement Grout Sand-Cement (Concrete) Grout Concrete Clay-Sand Shury Bentonite-Sand Slurry Chipped Bentonite For monitoring wells and monitoring well boreholes only Bentonite Pellets Granular Bentonite Bentonite - Cement Grout								
Total Well Depth (ft.) 24 Casing Diameter (ins.) 2. (From groundsurface) Casing Depth (ft.) Was Well Annular Space Grouted? Yes No Unknown	(6) Sealing Materials Neat Cement Grout Sand-Cement (Concrete) Grout Concrete Clay-Sand Shury Bentonite-Sand Slurry Bentonite - Cement Grout Bentonite - Cement Grout Bentonite - Cement Grout								
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GENERAL INFORMATION		(2) FACIL	ITY NAME							
Well/Drillhole/Borehole	County		i Well Owne	r (lf Known)						
Location	Manitowoc	0								
let Am	M	E Present	Well Owner							
	. 25 : T. 19 N. R. 23	~_ 1								
(If applicable)		Street o	r Rouse							
Gov't Lot	Grid Number		- 7. 7							
Grid Location		1	tate, Zip Coo	ie						
ft. N. Civil Town Name	S.,ft. E. W		Well No. and	Vor Name (II An	plicable) WI Unique Well No.					
Manitowoc		Facility Well No. and/or Name (II Applicable) WI Unique Well No.								
Street Address of Well			For Abandon	rment						
1020 S. 26th	Street	Bo	orehole							
City, Village			Abandonmer	ıt						
Manitowoc		9	26/94							
LL/DRILLHOLE/BOREHO										
Original Well/Drillhole/Boreho	,	1.,	o Water (Fee							
(Date) 9/26	194		Piping Rem		(es No Not Applicable					
	la in ini		Removed?	= .	Yes No Not Applicable					
Monitoring Well	Construction Report Available?	1	cemoved: Left in Place:		os No Not Applicable					
∐ Water Well ☐ Drillhole	⊠ Yes □ No	If No. E		, H ,	Cas No					
Borehole	1	11.140, E	whien;							
A. Bordible		Was Ca	sing Cut Off	Below Surface?	☐ Yes ☐ No					
Construction Type:		1	•	Rise to Surface?	☐ Yes ☐ No					
	ven (Sandpoint) Dug	Did Material Settle After 24 Hours? Yes No								
Other (Specify)	If Yes, Was Hole Recopped? Yes No									
		(5) Requires	d Method of F	Placing Sealing M	atenal					
Formation Type:	_	· ·	Conductor Pipe-Gravity Conductor Pipe-Pumped							
Unconsolidated Formation	☐ Bedrock		Dump Bailer Other (Explain)							
Total Well Depth (ft.) _/6	Casing Diameter (ins.) 2	(6) Sealing			For monitoring wells and					
(From groundsurface)			Cement Gro		monitoring well boreholes only					
		. ==	l-Cement (Co	ncrete) Grout						
Casing Depth (ft.)	•	Conc		1	Bentonite Pellets					
WW-BA L.C. C		,	-Sand Slurry		Granular Bentonite					
Was Well Annular Space Group		Bentonite-Sand Slurry Bentonite - Cement Grout								
If Yes, To What Depth?	Feet	L Chip	ber Reuroun							
Sealing M	aterial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight					
				or Volume						
Bentonite Ch	ips	Surface	16							
Danjoinia Gri	Y									
	7									
				1						
				<u> </u>						
Comments: Boreh	ole.									
		1.40		0.00000	SALEMPEN ALOM ASSISTS					
Name of Person or Firm Doing	(10) FOR DNR OR COUNTY USE ONLY Date Received/Inspected District/County									
	tal Inc.	_ Date	Kecewed/just	pected	District/County					
62A Environmen	I Dan Cimin] 2								
Signature of Person Doing World	k Date Signed	Perm	wer/Inenecto	7						
Signature of Person Doing World B. Weh	k Date Signed	Revie	ewer/Inspecto	r						
Si gnature of Person Doing World B. Weh Street or Route	Date Signed Telephone Number									
Signature of Person Doing World	k Date Signed		ewer/Inspecto							

TO THE STATE OF TH	Nicable. Also, see instructions or			·						
) GENERAL INFORMATION			ITY NAME							
Well/Drillhole/Borehole Location	County Manitowoc		u Well Owne	r (if Known)						
NE 1/4 of SE 1/4 of Sec.	25 : T. 19 N. R. 23	Present	Well Owner							
(If applicable) Gov't Lot	Grid Number	Street	r Rouse	· · · · · · · · · · · · · · · · · · ·						
Grid Location	Criz Number	Covs	tate Zin Cox	<u> </u>						
ft. N S	ft. 🗆 E. 🔲 W.	City, State, Zip Code								
Civil Town Name Manitowoc			Well No. and P-7	Vor Name (II App	plicable) WI Unique Well No.					
Street Address of Well	:	I	For Abandon	ment						
1020 S. 26th	Street		orehole							
City, Village Manitowoc			Abandonmer 27/94	ıt						
WELL/DRILLHOLE/BOREHOL		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·							
Original Well/Drillhole/Borehole	Construction Completed On	(4) Depth t	o Water (Fee	i) <u>9</u>						
(Date) $9/27/9$	14		Piping Rem	= .	(cs No No Not Applicable					
□ Manianian Wall	Congruencian Remort Assailable?		Removed?		Yes No Not Applicable					
☐ Monitoring Well ☐ Water Well	Construction Report Available? X Yes No	1	Left in Place	, 남 ;	(es No Not Applicable					
Drillhole	A IS LINO	If No. E		ъ.	U 16					
Borehole	1									
,		,	•	Below Surface?	Yes No					
Construction Type:	n (Sandroint) Dug	Did Sealing Material Rise to Surface? Yes No Did Material Settle After 24 Hours? Yes No If Yes, Was Hole Retopped? Yes No								
Drilled Drive	n (Sandpoint) Usg									
		t		Placing Sealing M						
Formation Type:										
Unconsolidated Formation	☐ Bedrock	Conductor Pipe-Gravity Conductor Pipe-Pumped Dump Bailer Other (Explain) (6) Sealing Materials For monitoring wells and								
Total Well Depth (ft.) 16	Casing Diameter (ins.) 2									
(From groundsurface)		1 	Cement Gro		monitoring well boreholes only					
Casing Depth (ft.)		∐ Sand	l-Cement (Co		☐ Bentonite Pellets					
		=	-Sand Shurry	1	Granular Bentonite					
Was Well Annular Space Grouted	? Yes No Unknown		onite-Sand Si	lurry ;	Bentonite - Cement Grout					
If Yes, To What Depth?	Feet	Chip	ped Bentoniu							
Sealing Mate	rial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight					
Bentonite Chi	08	Surface	16							
Comments: Borehol	e.									
Name of Person or Firm Doing Se	aling Wast	(10)	FOR	DNB OB CC	NUNTY HER ONLY					
GZA Environmenta	(10) FOR DNR OR COUNTY USE ONLY Date Received/Inspected District/County									
Signature of Person Doing Work	Inc. Date Signed									
B. Weh		Revie	wer/Inspecto	r						
Street or Route 55N4140 Duplainville	Telephone Number (414) 691 - 2662		ma ann Manna							
H-NTITU DUPIKINUTILE	1,111,071-7007	rollo	w-up Necessa	uy						
City, State, Zip Code	1									

Table 2
GeoProbe Survey Information
Susie's Restaurant - USH 151
Manitowoc, Wisconsin

GeoProbe™	Northing	Easting	Elevation
GP-1	234564.344	176124.298	195.488
GP-2	234552.555	176126.179	195.660
GP-3	234551.739	176145.166	195.620
GP-4	234565.854	176145.656	195.603
GP-5	234572.375	176146.484	195.520
GP-6	234569.235	176121.115	195.162
GP-7	234542.440	176148.805	195.515
GP-8	234546.959	176123.142	195.705
GP-9	234523.719	176149.556	195.487
GP-10	234521.989	176123.608	195.671
GP-11	234513.751	176149.761	195.480
GP-12	234501.965	176129.041	195.577

Survey Information Completed by HNTB Corporation.

						nergency Réspon Istewater	0	Under Water Other:	Resou	Tanks rces						8	4526>	
	y/Pros			Restaura	nt			,		mit/Mon	vitoring	Numbe	r	Boring GP-1	Numb	er	<u> </u>	Page 1 of 1
			Date Drilling Started 09/26/94				Oate 0 09/26	_	Comple	ted	Orilling Method Geoprobe							
R F	acility	Well No	o. W	Unique W	ell No.	Common Well Na	ame	,				Surface Elevation 195.48 Feet MSL Borehole Olamo					eter	
ate	Locati Plane 4 of SE		f Sect	ion 25. T l	19 N, R 23 E			Grid of Origin Lat Local Grid Location (if applicable) Feet S Feet N										
Count Manite	Y OWOC CO	ounty					DNR 0	County		Civil To								
Sar	npie													Soil	Prop	erties		
Number	Length Recovered (in)	Blow Counts	Depth in Feet		And Ge	ock Description cologic Origin For ch Major Unit			nscs	Graphic Log	Well Diagram	PID/ID	Compressive Strength	Moisture Content	Liquid	Plastic Limit	P 200	RQD/ Comments
	12		E	Fill: Sil	halt and ba	se coarse parse sand, trac	e		SM			<1						
c²	12		2.5 	topsoil	l-red brown	-moist				•		<1						
3	18		E ₅		at 9 feet	nd, trace silt-bro	own-mo	15 (<1					<u> </u> 	
	22		E 7.5						SP			<1						
5	12		E									<1						-
3	12		E 10									1						
ľ	12		<u> </u>	, -		ine gravel, trace lish brown-moist			a 1			1.4	1.50					
8	14		-15			-			CL			<1	1.50					
			20	Boring Boring		to 16.0 feet by G with bentonite cr		e.										
			22 25 27															
e	eDV CP	rtify II	hat th	e informati	ion on this f	orm is true and c	orrect	to the	Dest o	f my kn	owled	ge.	<u> </u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>
Signa		Mi	(n.)	f.				Firm		5 0			ints	- Ct	<u> </u>			
						nd 162, Wis. Stat			of this	report	ıs ma	ndatory	. Pen	alties: f	orfe			

both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

O Haz. Waste

ate of Wisconsin

partment of Natural Resources

Route To:

☐ Solid Waste

SOIL BORING LOG INFORMATION

Form 4400-122

) GENERAL INFORMATION	(2) FACILITY NAME							
Well/Drillhole/Borehole County	Onginal Well Owner (If Known)							
Location Manitowoc								
⊠ г	Present Well Owner							
NE 1/4 of SE 1/4 of Sec. 25 : T. 19 N. R. 23								
(If applicable)	Street or Route							
Gov't Lot Grid Number								
Grid Location	City, State, Zip Code							
ft. N. S., ft. E. W.								
Civil Town Name Manitowac	Facility Well No. and/or Name (If Applicable) WI Unique Well No							
Street Address of Well	Reason For Abandonment							
1020 S. 26th Street	Borehole							
City, Village	Date of Abandonment							
Manitowoc	9/26/94							
VELL/DRILLHOLE/BOREHOLE INFORMATION								
Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet)							
(Date) 9/26/94	Pump & Piping Removed? Yes No Not Applicab							
	Liner(s) Removed? Yes No Not Applicab							
Monitoring Well Construction Report Available?	Screen Removed? Yes No Not Applicab							
☐ Water Well ☐ No	Casing Left in Place? Yes No							
Drillhole	If No, Explain							
⊠ Borehole	Was Casing Cut Off Below Surface? Yes No							
Construction Type:	Did Sealing Material Rise to Surface? Yes No							
Drilled Driven (Sandpoint) Dug	Did Material Settle After 24 Hours? Yes No If Yes, Was Hole Retopped? Yes No							
Other (Specify)								
	(5) Required Method of Placing Sealing Material							
Formation Type:	Conductor Pipe-Gravity Conductor Pipe-Pumped Dump Bailer Other (Explain) (6) Sealing Materials For monitoring wells and							
Unconsolidated Formation Bedrock								
Total Well Depth (ft.) / Casing Diameter (ins.) 2								
(From groundsurface)	☐ Neat Cement Grout monitoring well boreholes or							
	Sand-Cernent (Concrete) Grout							
Casing Depth (ft.)	Concrete Bentonite Pellets							
	☐ Clay-Sand Shurry ☐ Granular Bentonite							
Was Well Annular Space Grouted? Yes No Unknown	· —							
If Yes, To What Depth? Feet	Chipped Bentonite							
Sealing Material Used	From (Ft.) To (Ft.) Sacks Sealant Mix Ratio or Mud Weight							
	or Volume							
Bentonite Chips	Surface 16							
DOMONITO CINOS								
Commens: Borehole								
	1 100 000 000 000 000							
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY							
62A Environmental Inc. Signulure of Person Doing Work Date Signed	Date Received/Inspected District/County							
	Reviewer/Inspector							
	I I REVIEWED/INSUCCION							
B. Weh	Kestewei/Hisperior							
Street or Route Telephone Number	-							
B. Weh	Follow-up Necessary							

Pewaukee

53072

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 8-89

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. dmin. Code, whichever is applicable. Also, see instructions on back. GENERAL INFORMATION (2) FACILITY NAME Onginal Well Owner (If Known) County Well/Drillhole/Borehole Location Manitowoc Present Well Owner ΣĘ 1/4 of S∞. <u>25</u> : T. <u>19</u> № R. NE 1/4 of SE (If applicable) Street or Route Gov't Lot **Grid Number** Grid Location City, State, Zip Code ft. \square N. \square S.. ft. ☐ E. ☐ W. Civil Town Name Facility Well No. and/or Name (If Applicable) WI Unique Well No. Manitowoc GP-9 Street Address of Well Reason For Abandonment Street 1020 Borehole City, Village Date of Abandonment 9/27/94 Manitowoc WELL/DRILLHOLE/BOREHOLE INFORMATION Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) ☐ Yes ☐ No ☒ Not Applicable (Date) Pump & Piping Removed? Liner(s) Removed? Yes No Not Applicable Monitoring Well Construction Report Available? Screen Removed? Ycs No Not Applicable Casing Left in Place? Water Well □ No Yes ⊠ Yes Drillhole If No, Explain Borehole Was Casing Cut Off Below Surface? Yes No Did Sealing Material Rise to Surface? Construction Type: Yes 🗌 No Drilled ☐ Dug Did Material Settle After 24 Hours? Yes | No Driven (Sandpoint) If Yes, Was Hole Retopped? Yes | No Other (Specify) (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped Unconsolidated Formation ☐ Bedrock Dump Bailer Other (Explain) Total Well Depth (ft.) _ 10 Casing Diameter (ins.) 2. (6) Sealing Materials For monitoring wells and (From groundsurface) ■ Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout Casing Depth (ft.) Concrete Bentonite Pellets Clay-Sand Shurry Gramular Benionite ☐ Yes ☐ No ☐ Unknown Was Well Annular Space Grouted? Bentonite-Sand Slurry Bentonite - Cement Grout If Yes, To What Depth? Feet Chipped Bentonite No. Yards, Sacks Sealant Mix Ratio or Mud Weight Sealing Material Used From (FL) To (FL) or Volume Bentonite Surface Chips 16 Comments: Borehole Name of Person or Firm Doing Sealing Work FOR DNR OR COUNTY USE ONLY Environmental Inc. Date Received/Inspected District/County Signature of Person Doing Work Date Signed Reviewer/Inspector B. Weh Street or Route Telephone Number #55 N4140 Ouplainville (414) 691-2662 Follow-up Necessary City, State, Zip Code

State of Wisconsin Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 8-89

All abandonment work shall be performed in accordance with th admin. Code, whichever is applicable. Also, see instructions or	
GENERAL INFORMATION	(2) FACILITY NAME
Well/Drillhole/Borehole County Location Manitowac	Onginal Well Owner (If Known)
NE 1/4 of SE 1/4 of Sec. 25 : T. 19 N. R. 23 W	Present Well Owner
(If applicable) Gov't Lot Grid Number	Street or Route
Grid Location	City, State, Zip Code
ft. N. S.,ft. E. W.	
Civil Town Name Manitowoc	Facility Well No. and/or Name (II Applicable) WI Unique Well No.
Street Address of Well	Reason For Abandonment
1020 3. 26th Street	Borehole
City, Village	Date of Abandonment
Manitowoc	9 27 94
WELL/DRILLHOLE/BOREHOLE INFORMATION Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet) 9
1 1	1 · · · · · · · · · · · · · · · · · · ·
(Date) 9 27 94	Pump & Piping Removed? Yes No Not Applicable Liner(s) Removed? Yes No Not Applicable
Monitoring Well Construction Report Available?	Screen Removed? Yes No Not Applicable Yes No Not Applicable
□ Water Well ⊠ Yes □ No	Casing Left in Place? Yes No
Drillhole	If No, Explain
Borehole	
	Was Casing Cut Off Below Surface? Yes No
Construction Type: Driven (Sandroint) Dug	Did Sealing Material Rise to Surface? Yes No Did Material Settle After 24 Hours? Yes No
	Did Material Settle After 24 Hours? Yes No If Yes, Was Hole Retopped? Yes No
Other (Specify)	
Formation Type:	(5) Required Method of Placing Sealing Material
☐ Unconsolidated Formation ☐ Bedrock	☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped ☐ Dump Bailer ☐ Other (Explain)
Total Well Depth (ft.) 24 Casing Diameter (ins.) 2	Dump Bailer Other (Explain) (6) Sealing Materials For monitoring wells and
(From groundsurface)	Neat Cement Grout monitoring well boreholes only
	Sand-Cernent (Concrete) Grout
Casing Depth (ft.)	Concrete Bentonite Pellets
	Clay-Sand Shirry Granular Benionite
Was Well Annular Space Grouted? Yes No Unknown If Yes, To What Depth?	☐ Bentonite-Sand Slurry ☐ Bentonite - Cement Grout ☐ Chipped Bentonite
If Yes, To What Depth? Feet	
Sealing Material Used	From (FL) To (FL) Sacks Sealant or Volume No. Yards, Sacks Sealant or Wix Ratio or Mud Weight
Bentonite Chips	Surface 24
Comments: Borehole	
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY
GZA Environmental Inc.	Date Received/Inspected District/County
Signature of Person Doing Work Date Signed	Barrana (a martin
Street or Route Telephone Number	Reviewer/Inspector
=55 N4140 Duplainville (414) 691-2662	Follow-up Necessary
City, State, Zip Code	
Pewaukee WI 53072	

State of Wisconsin Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 8-89

Department of Franklit Acsources	FORTH 3300-3D Rev. 8-89
All abandonment work shall be performed in accordance with the	
Admin. Code, whichever is applicable. Also, see instructions on	
) GENERAL INFORMATION	(2) FACILITY NAME Onginal Well Owner (If Known)
Well/Drillhole/Borehole County Location Manitowoc	Ongues West Owner (It Kilowit)
⊠ E	Present Well Owner
NE 1/4 of SE 1/4 of Sec. 25 : T. 19 N. R. 23 W	
(If applicable)	Street or Rouse
Grid Location Grid Number	City, State, Zip Code
ft. N S., ft. E. W.	
Civil Town Name	Faculty Well No. and/or Name (If Applicable) WI Unique Well No.
Manitowac Street Address of Well	GP-II Reason For Abandonment
1020 S. 26th Street	Borehole
City, Village	Date of Abandonment
Manitowoc	9/27/94
WELL/DRILLHOLE/BOREHOLE INFORMATION Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet)
(Date) 9/27/94	Pump & Piping Removed? Yes No Not Applicable
	Liner(s) Removed? Yes No Not Applicable
Monitoring Well Construction Report Available?	Screen Removed? Yes No Not Applicable
☐ Water Well ☐ Yes ☐ No	Casing Left in Place? Yes No
☐ Drillhole ☐ Borehole	II NO, Expan
	Was Casing Cut Off Below Surface? Yes No
Construction Type:	Did Sealing Material Rise to Surface? Yes No
Drilled Driven (Sandpoint) Dug Other (Specify)	Did Material Settle After 24 Hours? Yes No If Yes, Was Hole Retopped? Yes No
Cond (specify)	
Formation Type:	(5) Required Method of Placing Sealing Material Conductor Pipe-Gravity Conductor Pipe-Pumped
Unconsolidated Formation Bedrock	Dump Bailer Other (Explain)
Total Well Depth (ft.) 24 Casing Diameter (ins.) 2	(6) Sealing Materials For monitoring wells and
(From groundsurface)	Neat Cement Grout monitoring well boreholes only
Casing Depth (ft.)	Sand-Cernent (Concrete) Grout Concrete ! Bentonite Pellets
	☐ Clay-Sand Shurry ☐ Granular Bentonite
Was Well Annular Space Grouted?	
If Yes, To What Depth? Feet	Chipped Bentonite
Sealing Material Used	From (Ft.) To (Ft.) Sacks Sealant Mix Ratio or Mud Weight
	or Volume
Bentonite Chips	Surface 24
	,
S) Comments: Borehole	
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY
GZA Environmental Inc. Signature of Person Doing Work Date Signed	Date Received/Inspected District/County
B. Weh	Reviewer/Inspector
Street or Route Telephone Number	
SSN4140 Duplainville (414) 691 - 2662 City, State, Zip Code	Follow-up Necessary
Pewankee WI 53072	
· CUGUNCE WI COULE	I

State of Wisconsin Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 8-89

) GENERAL INFORMATIO	S .	(2) FACIL	ITY NAME		
Well/Drillhole/Borehole	County		Well Owne	r (lí Known)	
Location	manitowoc			_	
مار ویت	25 . T 19 NR 23	Present	Well Owner		
NE 1/4 of SE 1/4 of Sec.	25 : T. 19 N. R. 23 W	_1			
(If applicable) Gov't Lot	Grid Number	2 trees o	r Route		
Grid Location	Gna Number	City, Si	tate, Zip Coo	e	
ft. □ N. □ S	., ft. ☐ E. ☐ W.	-		~	
Civil Town Name		_		Vor Name (II Ap	plicable) WI Unique Well No.
Manitowoc			-12		
Street Address of Well 1020 S. 26th	Storet		For Abandon	meni	
City, Village	211.561.		nehole Abandonmen	ır	
Manitowoe		1	27/94		
ELL/DRILLHOLE/BOREHOI	E INFORMATION				
Original Well/Drillhole/Borehole	Construction Completed On	(4) Depuh u	Water (Fee	9	
$(Date) \qquad \qquad 9/27/96$	4		Piping Rem	oved?	Yes No No Not Applicable
		1	Removed?		Yes No Not Applicable
Monitoring Well	Construction Report Available?		lemoved? Left in Place?		Yes No Not Applicable
Water Well Drillhole	⊠ Yes □ No	If No. E			ics No
Borehole	1		~p-==-		
		Was Cas	sing Cut Off	Below Surface?	Yes No
Construction Type:		Did Sea	ling Material	Rise to Surface?	☐ Yes ☐ No
	an (Sandpoint) Dug			fter 24 Hours?	Yes No
Other (Specify)		lf Yes	, Was Hole R	etopped?	Yes No
Formation Type:		(5) Required	i Method of F	lacing Sealing M	laterial
Unconsolidated Formation	☐ Bedrock	. =	tuctor Pipe-G	• =	Conductor Pipe-Pumped
•		Dum	•		Other (Explain)
Total Well Depth (ft.) 16 (From groundsurface)	Casing Diameter (ins.) 2	(6) Sealing	Materials : Cement Gro		For monitoring wells and
(110m groundman)		_	i-Cement (Co		monitoring well boreholes only
Casing Depth (ft.)		Conc	,	, 5.56.	Bentonite Pellets
		Clay	-Sand Slurry		Gramular Bentomite
			onite-Sand Si	•	Bentonite - Cement Grout
Was Well Annuiar Space Grouted					
Was Well Annular Space Grouted If Yes, To What Depth?	i? Yes No Unknown Feet		ped Bentoniu	· · · · · · · · · · · · · · · · · · ·	
If Yes, To What Depth?	Feet	Chip		No. Yards,	Mix Ratio or Mud Weight
-	Feet		To (Ft.)		Mix Ratio or Mud Weight
If Yes, To What Depth? Sealing Mat	Feet erial Used	Chip	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth?	Feet erial Used	From (Ft.)		No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth? Sealing Mat	Feet erial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth? Sealing Mat	Feet erial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth?	Feet erial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth? Sealing Mat	Feet erial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth? Sealing Mat Bentonite Ch	Feet erial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth?	Feet erial Used	From (Ft.)	To (FL)	No. Yards, Sacks Sealant	Mix Ratio or Mud Weight
If Yes, To What Depth? Sealing Mat Bentonite Ch	Feet erial Used ips	From (Ft.)	To (FL)	No. Yards, Sacks Sealant or Volume	Mix Ratio or Mud Weight OUNTY USE ONLY
If Yes, To What Depth? Sealing Mat Bentonite Ch Comments: Borehol Name of Person or Firm Doing So 62A Environment	erial Used ips caling Work al Inc.	From (Ft.) Surface	To (FL)	No. Yards, Sacks Sealant or Volume	
Sealing Mat Bentonite Ch Comments: Borehol Name of Person or Firm Doing Seal Environment Signature of Person Doing Work	erial Used ips caling Work al Inc.	From (Ft.) Surface (10) Date	To (Ft.)	No. Yards, Sacks Sealant or Volume DNR OR Co	DUNTY USE ONLY
Sealing Mat Bentonite Ch Comments: Bovehol Name of Person or Firm Doing So 62A Environment Signature of Person Doing Work B. Weh	erial Used ios ealing Work al Inc. Date Signed	From (Ft.) Surface (10) Date	To (FL)	No. Yards, Sacks Sealant or Volume DNR OR Co	DUNTY USE ONLY
Sealing Mat Bentonite Ch Comments: Bovehol Name of Person or Firm Doing So 62A Environment Signature of Person Doing Work B. Weh Street or Route	erial Used ios caling Work al Inc. Date Signed	From (Ft.) Surface (10) Date Revise	FOR Received/Inspector	No. Yards, Sacks Sealant or Volume DNR OR Co	DUNTY USE ONLY
Sealing Mat Bentonite Ch Comments: Bovehol Name of Person or Firm Doing So 62A Environment Signature of Person Doing Work B. Weh	erial Used ios ealing Work al Inc. Date Signed	From (Ft.) Surface (10) Date Revise	To (Ft.)	No. Yards, Sacks Sealant or Volume DNR OR Co	DUNTY USE ONLY

Sample	Depth	Analyte	Concentration	Comments
VOA/DW Blank	na	Vinyl-CI DCE TCE PCE	nd nd nd <2	
GP8	14-16'	Vinyl-CI DCE TCE PCE	nd nd nd <2	
GP8	8-10'	Vinyl-CI DCE TCE PCE	nd nd 13 <2	
GP8 Duplicate	8-10'	Vinyi-CI DCE TCE PCE	nd nd 13 <2	
GP5	8-10'	Vinyl-Cl DCE TCE PCE	nd nd 6 129	
GP5	GW	Vinyl-CI DCE TCE PCE	nd 26 30 28	
GP5 Duplicate	8-10'	Vinyl-CI DCE TCE PCE	nd nd 8 195	
GP5	22-24'	Vinyl-CI DCE TCE PCE	nd nd nd <2	24.6 ppb tolvere
Syringe Blank	na	Vinyl-CI DCE TCE PCE	nd nd nd <2	
GP4	8-10'	Vinyl-CI DCE TCE PCE	nd 18 18 134	501 ppo tetracniorsettulene

Page 2

Sample	Depth	Analyte	Concentration	Comments
Halocarbon Standard	na	Vinyl-CI DCE	nd 16	
		TCE PCE	nd 27	
GP6	6-8'	Vinyl-CI DCE	nd nd	
		TCE PCE	nd 4	Likely background
GP4	14-16'	Vinyl-Cl	nd	
		TCE BCE	nd nd	
GP6	14-16'	PCE Vinyl-Cl	<2 nd	
3 , 0	14-10	DCE	nd	
		TCE	nd	
		PCE	<2	
GP3	2-4'	Vinyl-Cl	nd	
		DCE	nd	
		TCE	8	
		PCE	148	
VOA/DW	na	Vinyl-Cl	nd	
Blank		DCE	nd	
		TCE	nd	
		PCE	5	Likely background
GP3	22-24'	Vinyl-Cl	nd	
		DCE	nd	
		TCE	nd	
		PCE	<2	
Halocarbon	na	Vinyl-Cl	nd	
Standard		DCE	31	
		TCE	nd	
		PCE	27	
GP7	0-2'	Vinyl-Cl	nd	
		DCE	nd	
		TCE	nd 07	
		PCE	97	
VOA/DW	na	Vinyl-Cl	nd	
Blank		DCE	nd	
		TCE	nd	
		PCE	<2	

Sample	Depth	Analyte	Concentration	Comments			
GP7	14-16'	Vinyl-CI DCE TCE PCE	nd nd nd <2			•	
GP9	10-12'	Vinyl-CI DCE TCE PCE	nd nd nd <2				
GP9	GW	Vinyl-CI DCE TCE PCE	nd 133 <2 <2				٠.
GP9	14-16'	Vinyl-CI DCE TCE PCE	nd nd nd <2		·		
GP11	8-10'	Vinyl-CI DCE TCE PCE	nd nd nd 3	Likely background	1 <u>ab</u> 3.96 ppm 0.70 ppm 1.53 pcm 5.11	n-Eutyleanen isopropylennen naphthaisne 2, 1-trimoth	erterem CUE Landardo
GP11	GW	Vinyl-CI DCE TCE PCE	nd nd 2 <2		or o ppm	2,4-tsimost	lylbengene
GP11 Duplicate	8-10'	Vinyl-CI DCE TCE PCE	nd nd nd 6	Approximately 45 p	pm GRO		
GP11	22-24'	Vinyl-CI DCE TCE PCE	nd nd nd nd				
GP12	8-10'	Vinyl-CI DCE TCE PCE	nd nd nd nd				
GP12	14-16'	Vinyl-CI DCE TCE PCE	nd nd nd				

Sample	Depth	Analyte	Concentration	Comments
GP10	2-4'	Vinyl-CI DCE TCE PCE	nd nd nd 124	
GP10	2-4'	Vinyl-CI DCE TCE PCE	nd nd nd 147	
VOA/DW Blank	na	Vinyl-CI DCE TCE PCE	nd nd nd <2	
GP10	22-24'	Vinyl-CI DCE TCE PCE	nd nd nd <2	
Halocarbon Standard	na	Vinyl-CI DCE TCE PCE	nd 31 nd 28	

nd - no detect

Vinyl-Cl - vinyl chloride

DCE - cis-dichloroethylene

TCE - trichloroethylene

PCE - tetrachloroethylene

VOA/DW - volatile organic analysis vial/distilled water

all concentrations in parts per billion (ppb)

GZA GeoEnvironmental, Inc.
In-Field Analytical Survey Results
Client: STS Consultants, Ltd.

Project:

Susie's Restaurant-Manitowoc, WI

Date:

9/26-27/94

	Date.	9120-21194		
			Concentration	
Sample	Depth	Analyte	(ppb)	Comments
Halocarbon Standard	na	Vinyl-CI DCE	nd 32	
		TCE	nd	
		PCE	24	
		FOL	24	
200 ppb	na	Vinyl-Cl	200	
TCE and		DCE	nd	
vinyl-cl		TCE	180	
		PCE	nd	
VOA/DW	na	Vinyl-Cl	nd	
Blank		DCE	nd	
		TCE	nd	
		PCE	nd	
GP1	4-6'	Vinyl-Cl	nd	
	. •	DCE	nd	
		TCE	nd	
		PCE	47	
GP1	10-12'	Vinyl-Cl	nd	
O	10-12	DCE	42	
		TCE	28	
		PCE	<2 <2	
		1 01	~2	
GP2	8-10'	Vinyl-Cl	nd	
		DCE	21	
		TCE	15	
		PCE	<2	
GP2	14-16'	Vinyl-Cl	nd	
		DCE	nd	
		TCE	nd	
		PCE	<2	
GP2	4-6'	Vinyl-Cl	nd	
		DCE	nd	
		TCE	5	
		PCE	326	



November 8, 1994

ENVIRONMENTAL AND ANALYTICAL SERVICES

STS Consultants 11425 W. Lake Park Dr. Milwaukee, WI 53224

Attn: Sue Murawski

Re: 84526XA

Please find enclosed the analytical results for the samples received September 28, 1994.

All analyses were completed in accordance with appropriate EPA methodologies. Methods and dates of analysis are included in the report tables. Please note the quality assurance narrative that accompanies the report pages.

The chain of custody document is enclosed. If you have any questions about the results, please call. Thank you for using Enviroscan Corp. for your analytical needs.

Sincerely,

Enviroscan Corp.

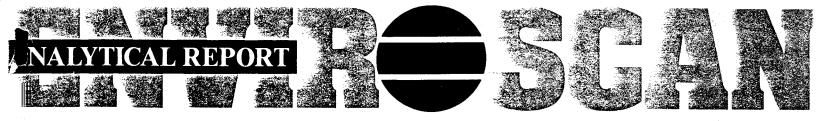
Laurie M. Pietrowski Analytical Chemist

UALITY ASSURANCE



Quality Assurance Narrative

(a) Check standards: Not all the compounds were within the concentration control limits. A low standard was analyzed and compared with the sample data to confirm any detects present. The haloalkane standard was low for almost all compounds. Our records show that a new lot of check standard was opened when this problem first appeared. Upon comparison between old and new lot numbers there appears to be a twenty percent variation in standards. Therefore, the qualifier for check standard low is probably not indicative of instrumental or preparation precision. This problem has since been corrected.



Attn: Sue Murawski

CUST NUMBER: 84526XA
SAMPLED BY: Client
DATE REC'D: 09/28/94
REPORT DATE: 11/08/94
PREPARED BY: LMP_///
REVIEWED BY: \| \| \| \| \| \| \| \|

***************************************					/)10
		Detection	GP-5 S-12		Date
	Units	Limit	09/26/94	Qualifiers	Analyzed
_	011200			<u>Parazzzos D</u>	inary zea
EPA 160.3					
Total Solids	ક્ર	_	77.6		09/30/94
	-				05,00,51
EPA 8021_					
Benzene	μg/g	0.0026	X		09/30/94
Bromobenzene	μg/g	0.0064	X		09/30/94
Bromodichloromethane	μg/g	0.0064	X	CSL	09/30/94
n-Butylbenzene	μg/g	0.0130	X	DUP	09/30/94
sec-Butylbenzene	μg/g	0.0130	X	DUP	09/30/94
tert-Butylbenzene	μg/g	0.0130	X	DUP	09/30/94
Carbon Tetrachloride	μg/g	0.0064	X	CSL	09/30/94
Chlorobenzene	μg/g	0.0260	X		09/30/94
Chlorodibromomethane	μg/g	0.0064	X	CSL	09/30/94
Chloroethane	μg/g	0.0260	X		09/30/94
Chloroform	μg/g	0.0064	X	CSL	09/30/94
Chloromethane	μg/g	0.0260	X	CSL CC	09/30/94
o-Chlorotoluene	μg/g	0.0130	X		09/30/94
p-Chlorotoluene	μg/g	0.0130	X		09/30/94
1,2-Dibromo-3-chloropropan	e μg/g	0.1700	X		09/30/94
1,2-Dibromoethane	μg/g	0.0130	X	CSL	09/30/94
1,2-Dichlorobenzene	μg/g	0.0130	X		09/30/94
1,3-Dichlorobenzene	μg/g	0.0130	X		09/30/94
1,4-Dichlorobenzene	μg/g	0.0064	X		09/30/94
Dichlorodifluoromethane	μg/g	0.0260	X		09/30/94
1,1-Dichloroethane	μg/g	0.0064	X	CSL	09/30/94
1,2-Dichloroethane	μg/g	0.0064	X	CSL	09/30/94
1,1-Dichloroethylene	μg/g	0.0052	X	CSL	09/30/94
cis-1,2-Dichloroethylene	μg/g	0.0064	X	CSL	09/30/94
trans-1,2-Dichloroethylene	μg/g	0.0064	X	CSL	09/30/94
1,2-Dichloropropane	μg/g	0.0064	X	CSL	09/30/94
1,3-Dichloropropane	μg/g	0.0064	X	CSL	09/30/94
2,2-Dichloropropane	μg/g	0.0260	X	CSL	09/30/94
Ethylbenzene	μg/g	0.0130	X		09/30/94
Hexachlorobutadiene	μg/g	0.0130	X		09/30/94
Isopropylbenzene	μg/g	0.0130	X	DUP	09/30/94
Isopropyl Ether	μg/g	0.0130	X	CSL DUP	09/30/94
p-Isopropyltoluene	μg/g	0.0130	X	DUP	09/30/94
Methyl tert Butyl Ether	μg/g	0.0260	X	CSL DUP	09/30/94
Methylene Chloride	μg/g	0.0320	X		09/30/94
Naphthalene	μg/g	0.0130	X	DUP	09/30/94
n-Propylbenzene	μg/g	0.0130	X	DUP	09/30/94
Tetrachloroethylene	μg/g	0.0064	X		09/30/94
1,1,2,2-Tetrachloroethane	μg/g	0.0130	X		09/30/94
Toluene	μg/g	0.0258	0.0346	SH	09/30/94
1,2,3-Trichlorobenzene	μg/g	0.0130	X		09/30/94
1,2,4-Trichlorobenzene	μg/g	0.0130	X		09/30/94

Analytical No.:

21920

X = Analyzed but not detected.
Results calculated on a dry weight basis.

all analyses conducted in accordance with Enviroscan Quality Assurance Program.



Attn: Sue Murawski

CUST NUMBER: 84526XA SAMPLED BY: Client DATE REC'D: 09/28/94 REPORT DATE: 11/08/94 PREPARED BY: LMP AND

PREPARED	BX:	LMP,
REVIEWED	BY:	MY

}		<u>Units</u>	Limit	09/26/94	<u> Oualifiers</u>	Date <u>Analyzed</u>
	1,1,1-Trichloroethane	μg/g	0.0064	x	CSL	09/30/94
	1,1,2-Trichloroethane	μg/g	0.0064	X	CSL	09/30/94
	Trichloroethylene	μg/g	0.0026	X	CSL	09/30/94
	Trichlorofluoromethane	μg/g	0.0130	X	CSL	09/30/94
	1,2,4-Trimethylbenzene	μg/g	0.0130	X	DUP	09/30/94
	1,3,5-Trimethylbenzene	μg/g	0.0130	X	CSL	09/30/94
	Vinyl Chloride	μg/g	0.0026	X		09/30/94
	m- & p-Xylene	μg/g	0.0130	X	DUP	09/30/94
_	o-Xylene	μg/g	0.0130	x		09/30/94
	Analytical No.:			21920		

5 X = Analyzed but not detected.

STS Consultants 11425 W. Lake Park Dr. Milwaukee, WI 53224

Attn: Sue Murawski

CUST NUMBER: 84526XA SAMPLED BY: Client DATE REC'D: 09/28/94 **REPORT DATE: 11/08/94** PREPARED BY: LMP 2mp REVIEWED BY:

Date

·	Units	Detection Limit	GP-4 S-5 09/26/94	<u>Qualifiers</u>	Date Analyzed
EPA 160.3					•
Total Solids	*	-	86.3		09/30/94
EPA 8021_					
Benzene	μg/g	0.0015	X		10/01/94
Bromobenzene	μg/g	0.0039	X		10/01/94
Bromodichloromethane	μg/g	0.0039	X	CSL	10/01/94
n-Butylbenzene	μg/g	0.0080	X	DUP	10/01/94
sec-Butylbenzene	μg/g	0.0080	X	DUP	10/01/94
tert-Butylbenzene	μg/g	0.0080	X	DUP	10/01/94
Carbon Tetrachloride	μg/g	0.0039	X	CSL	10/01/94
Chlorobenzene	μg/g	0.0160	X		10/01/94
Chlorodibromomethane	μg/g	0.0039	X	CSL	10/01/94
Chloroethane	μg/g	0.0160	X		10/01/94
Chloroform	μg/g	0.0039	X	CSL	10/01/94
Chloromethane	μg/g	0.0160	X	CSL CC	10/01/94
o-Chlorotoluene	μg/g	0.0080	X		10/01/94
p-Chlorotoluene	μg/g	0.0080	X		10/01/94
1,2-Dibromo-3-chloropropane	μg/g	0.1000	X		10/01/94
1,2-Dibromoethane	μg/g	0.0080	X	CSL	10/01/94
1,2-Dichlorobenzene	μg/g	0.0080	X		10/01/94
1,3-Dichlorobenzene	μg/g	0.0080	X		10/01/94
1,4-Dichlorobenzene	μg/g	0.0039	X		10/01/94
Dichlorodifluoromethane	μg/g	0.0160	X		10/01/94
1,1-Dichloroethane	μg/g	0.0032	X	CSL	10/01/94
1,2-Dichloroethane	μg/g	0.0039	X	CSL	10/01/94
1,1-Dichloroethylene	μg/g	0.0039	X	CSL	10/01/94
cis-1,2-Dichloroethylene	μg/g	0.0039	X	CSL	10/01/94
trans-1,2-Dichloroethylene	μg/g	0.0039	X	CSL	10/01/94
1,2-Dichloropropane	μg/g	0.0039	X	CSL	10/01/94
1,3-Dichloropropane	μg/g	0.0039	X	CSL	10/01/94
2,2-Dichloropropane	μg/g	0.0160	X	CSL	10/01/94
Ethylbenzene	μg/g	0.0080	X		10/01/94
Hexachlorobutadiene	μg/g	0.0080	X		10/01/94
Isopropylbenzene	μg/g	0.0080	Х	DUP	10/01/94
Isopropyl Ether	μg/g	0.0080	X	CSL DUP	10/01/94
p-Isopropyltoluene	μg/g	0.0080	Х	DUP	10/01/94
Methyl tert Butyl Ether	μg/g	0.0160	X	CSL DUP	10/01/94
Methylene Chloride	μg/g	0.0200	X		10/01/94
Naphthalene	μg/g	0.0080	X	DUP	10/01/94
n-Propylbenzene	μg/ˌg	0.0080	X	DUP	10/01/94
Tetrachloroethylene	μg/g	0.0037	0.5010	CAL	10/01/94
1,1,2,2-Tetrachloroethane	μg/ˌg	0.0080	X 		10/01/94
Toluene	μg/ˌg	0.0160	X	CSL	10/01/94
1,2,3-Trichlorobenzene	μg/ˌg	0.0080	X		10/01/94
1,2,4-Trichlorobenzene	μg/g	0.0080	X		10/01/94

Analytical No.:

21921

X = Analyzed but not detected. Results calculated on a dry weight basis.

analyses conducted in accordance with Enviroscan Quality Assurance Program.

Attn: Sue Murawski

CUST NUMBER: 84526XA SAMPLED BY: Client DATE REC'D: 09/28/94 REPORT DATE: 11/08/94 PREPARED BY: LMPJM REVIEWED BY:

)		<u>Units</u>	Detection Limit	GP-4 S-5 09/26/94	Qualifiers	Date Analyzed
	1,1,1-Trichloroethane	μg/g	0.0039	x	CSL	10/01/94
	1,1,2-Trichloroethane	μg/g	0.0039	X	CSL	10/01/94
	Trichloroethylene	μg/g	0.0016	X	CSL	10/01/94
	Trichlorofluoromethane	μg/g	0.0080	X	CSL	10/01/94
	1,2,4-Trimethylbenzene	μg/g	0.0080	X	DUP	10/01/94
	1,3,5-Trimethylbenzene	μg/g	0.0080	X	CSL	10/01/94
	Vinyl Chloride	μg/g	0.0016	X		10/01/94
	m- & p-Xylene	μg/g	0.0080	X	DUP	10/01/94
	o-Xylene	μg/g	0.0080	X		10/01/94
; ;	_					
	Analytical No.:			21921		

X = Analyzed but not detected.

Attn: Sue Murawski

CUST NUMBER: 84526XA SAMPLED BY: Client DATE REC'D: 09/28/94 **REPORT DATE: 11/08/94** PREPARED BY: LMP 2m?
REVIEWED BY:

: 	Units	Detection <u>Limit</u>	GP-11 S-5 09/27/94	<u>Qualifiers</u>	Date Analyzed
EPA 160.3					
Total Solids	%	-	92.5		09/30/94
EPA 8021_					
Benzene	μg/g	0.09	X		10/10/94
Bromobenzene	μg/g	0.21	\mathbf{X}		10/10/94
Bromodichloromethane	μg/g	0.21	X		10/10/94
n-Butylbenzene	μg/g	0.42	3.96	CSL	10/10/94
sec-Butylbenzene	μg/g	0.42	X		10/10/94
tert-Butylbenzene	μg/g	0.42	X		10/10/94
Carbon Tetrachloride	μg/g	0.21	X		10/10/94
Chlorobenzene	μg/g	0.85	X		10/10/94
Chlorodibromomethane	μg/g	0.21	X		10/10/94
Chloroethane	μg/g	0.85	X		10/10/94
Chloroform	μg/g	0.21	X		10/10/94
Chloromethane	μg/g	0.85	X	CSL DUP	10/10/94
o-Chlorotoluene	μg/g	0.43	X		10/10/94
p-Chlorotoluene	μg/g	0.43	X		10/10/94
1,2-Dibromo-3-chloropropane	p μg/g	5.70	X	CSL	10/10/94
1,2-Dibromoethane	μg/g	0.43	X		10/10/94
1,2-Dichlorobenzene	μg/g	0.43	X		10/10/94
1,3-Dichlorobenzene	μg/g	0.43	X		10/10/94
1,4-Dichlorobenzene	μg/g	0.21	X		10/10/94
Dichlorodifluoromethane	μg/g	0.85	X	CSL	10/10/94
1,1-Dichloroethane	μg/g	0.17	X		10/10/94
1,2-Dichloroethane	μg/g	0.21	X		10/10/94
1,1-Dichloroethylene	μg/g	0.43	X		10/10/94
cis-1,2-Dichloroethylene	μg/g	0.21	X		10/10/94
trans-1,2-Dichloroethylene	μg/g	0.21	X		10/10/94
1,2-Dichloropropane	μg/g	0.21	X		10/10/94
1,3-Dichloropropane	μg/g	0.21	X		10/10/94
2,2-Dichloropropane	μg/g	0.85	X		10/10/94
Ethylbenzene	μg/g	0.42	X		10/10/94
Hexachlorobutadiene	μg/g	0.43	X		10/10/94
Isopropylbenzene	μg/g	0.42	0.70		10/10/94
Isopropyl Ether	μg/g	0.42	X	CSH	10/10/94
p-Isopropyltoluene	μg/g	0.42	X		10/10/94
Methyl tert Butyl Ether	μg/g	0.85	X		10/10/94
Methylene Chloride	μg/g	1.10	X .		10/10/94
Naphthalene	μg/g	0.42	1.53		10/10/94
n-Propylbenzene	μg/g	0.42	X		10/10/94
Tetrachloroethylene	μg/g	0.21	X		10/10/94
1,1,2,2-Tetrachloroethane	μg/g	0.43	X		10/10/94
Toluene	μg/g	0.85	X		10/10/94
1,2,3-Trichlorobenzene	μg/g	0.43	X		10/10/94
1,2,4-Trichlorobenzene	μg/g	0.43	X		10/10/94
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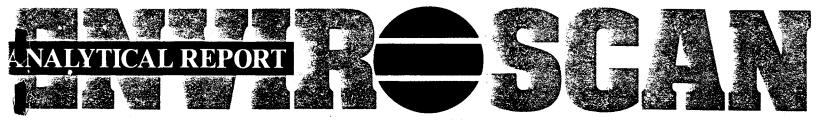
Analytical No.:

21922

X = Analyzed but not detected. Results calculated on a dry weight basis.

analyses conducted in accordance with Enviroscan Quality Assurance Program.

hviroscan Corp., 303 West Military Rd., Rothschild, WI 54474 1/800/338-SCAN Wisconsin Lab Certification No. 737053130



Attn: Sue Murawski

CUST NUMBER: 84526XA
SAMPLED BY: Client
DATE REC'D: 09/28/94
REPORT DATE: 11/08/94
PREPARED BY: LMP

	Units	Detection Limit	GP-11 S-5 09/27/94	Qualifiers	Date Analyzed
1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene Trichlorofluoromethane 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl Chloride m- & p-Xylene o-Xylene	ha\a ha\a ha\a ha\a ha\a ha\a ha\a	0.21 0.21 0.09 0.43 0.42 0.42 0.09 0.42	X X X X 5.16 X X X	DUP	10/10/94 10/10/94 10/10/94 10/10/94 10/10/94 10/10/94 10/10/94 10/10/94
Analytical No.:			21922		

X = Analyzed but not detected.



REPORT DATE: 11/08/94
PREPARED BY: LMP DMP
REVIEWED BY: \\(\)\(\)

CUST NUMBER: 84526XA SAMPLED BY: Client

09/28/94

DATE REC'D:

Attn: Sue Murawski

Qualifier Descriptions

CSL Check standard for this analyte exhibited a low bias. Sample results may also be biased low. Non-detects were verified by comparison with a low standard. DUP Result of duplicate analysis in this quality assurance batch exceeds the limits for precision. Sample results may also show a degree of variability. CC Estimated concentration due to the calibration correlation coefficient not meeting the minimum requirements under Wisconsin NR149. Recovery of surrogate was high. Result for sample may SH also be biased high. Estimated concentration beyond the calibration range, CAL but within the detector range of the instrument. CSH Check standard for this analyte exhibited a high bias. Sample results may also be biased high. Non-detects

were verified by comparison with a low standard.

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