

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor Darrell Bazzell, Secretary Southeast Region Annex 4041 North Richards Street P.O. Box 12436 Milwaukee, Wisconsin 53212-0436 Telephone 414-229-0800 FAX 414-229-0811

December 4, 2001

Robert Miller Spic & Span, Inc. 4301 North Richards St Milwaukee, WI 53212

Subject: Final Closure, Dry Clean USA, 17680 West Bluemound Road, file reference FID #268252050 ERR-ERP

Dear Mr. Miller:

Thank you for having your consultant submit the well abandonment forms. I have given this case final closure status. If you have any questions, please call me at 414-229-0850.

Sincerely, John Feenev

Wisconsin Department of Natural Resources

Cc: Graefe Anhalt, Schloemer SER File



Graef, Anhalt, Schloemer & Associates, Inc.

Engineers & Scientists



September 24, 2001

Mr. John Feeney Wisconsin Department of Natural Resources P.O. Box 12436 Milwaukee, WI 53212



SUBJECT:

T: Well Abandonment Documentation, Former Dryclean USA, 17680 West Bluemound Road, Brookfield, Wisconsin 53212 FID # 268252050

Dear John:

Enclosed are the well abandonment forms for the referenced site. Please provide a letter confirming final closure status.

Please contact me at 414-266-9284, if you have any questions.

Sincerely,

GRAEF, ANHALT, SCHLOEMER & Associates, Inc.

Brian Schneider, P.E. Project Engineer

Attachments: Well Abandonment Forms

Cc: Bob Miller – Spic and Span, Inc.

BWS F:\\John Feeney\ 9-24-2001 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.

(1)	GENERAL INFORMATION		(2)	FACILI	ΓΥ ΝΑΜΕ			
	Well/Drillhole/Borehole Location	County Milwaukee		Original ' Spic & S	Well Owner pan Brown	(If Known) stone Shopping	Center	
	<u>NW</u> 1/4 of <u>SW</u> 1/4 of Sec. <u>28</u>	; T7N; R20 □ w		Present W Same	/ell Owner			
	(If applicable) Gov't Lot	Grid Number		Street or 1 17689 W	Route /est Bluem	ound Road		
	Grid Locationft.	ft. 🗆 E. 🗆 W.		City, Stat Brookfie	e, Zip Code d, WISCOI	NSIN 53045		
	Civil Town Name Brookfield			Facility W MW-2	/ell No. and	or Name (If Appl	licable)	WI Unique Well No.
	Street Address of Well 17680 West Bluemound Road			Reason For Site Clos	or Abandon Sure	nent		
	City, Village Brookfield			Date of A 9/24/01	bandonmen	t		
WEI	L/DRILLHOLE/BOREHOLE INFOR	MATION						
(3) 10	Original Well/Drillhole/Borehole Co (Date) <u>NA</u>	onstruction Completed On	(4)	Depth to Pump & F Liner(s) R	Water (Feet) 'iping Remo emoved?	NA ved?	□ No □ No	X Not Applicable X Not Applicable
	Monitoring Well C Water Well Drillhole Borehole	onstruction Report Available? ŽYes □ No		Screen Re Casing Le If No, Exp	moved? ft in Place? lain	□ Yes Ø Yes	□ No □ No	X Not Applicable
	Construction Type: Drilled Driven (Specify)	Sandpoint) 🗆 Dug		Was Casir Did Sealir Did Mate If Yes, Wa	ng Cut Off B ng Material 1 rial Settle Af ns Hole Reto	elow Surface? Rise to Surface? fter 24 Hours? pped?	X Yes X Yes Yes X Yes	□ No □ No ☑ No □ No
	Formation Type: Unconsolidated Formation Total Borehole Depth (ft.) <u>15.0</u> C	☐ Bedrock Casing Diameter (ins.) <u>2.0</u>	 (5) Required Method of Sealing Material ▲ Conductor Pipe-Gravity □ Dump Bailer □ Other (Explain) 					
	(From ground surrace) Casing Depth (ft.) <u>14.97</u> Was Well Annular Space Grouted? If Yes, To What Depth?	□Yes & No & Unknown Feet	(6)	Sealing M Neat C Sand-(Concre Clay-S Bentor X Chipp	laterials Cement Grou Cement (Cor ete and Slurry nite-Sand Sh ed Bentonite	For r non crete) Grout E E urry	nonitorii itoring v Bentonite Granular	ng wells and vell boreholes only e Pellets Bentonite
(7)	Sealing Materi	ial Used		From (Ft.)	To (Ft.)	No. Yards Sacks Sealant or Volume	Mix Ra	tio or Mud Weight
	TOPSOIL			Surface	4"	20 LBS		
	MEDIUM CHIPS BE	NTONITE		4"	15.0	24 LBS		
								······
(8)	Comments:	·····						
(9) 	Name of Person or Firm Doing Seali RAEF ANHALT SCHLOEMER & A	ng Work ASSOCIATES, INC.		(10) F Date Recei	OR DNR O ved/Inspecte	R COUNTY USE	ONLY District/C	County
	Signature of Person Doing Work	Date Signed - コン・ロノ Telephone Number		Reviewer/I	nspector	I		
12	25 SOUTH 84TH STREET SUITE City, State, Zip Code	401 (414) 259-1500		Follow-up	Necessary			
M	ILWAUKEE, WISCONSIN 53214		JDN	R/COUNT	Ϋ́			FILE NAME

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.

(1)	GENERAL INFORMATION		(2)	FACILI	ΓΥ ΝΑΜΕ			
	Well/Drillhole/Borehole	County		Original Spic & S	Well Owner	(If Known) stone Shopping	Center	r
	NW 1/4 of SW 1/4 of Sec. 28	$\therefore T, 7 \qquad (X \in I)$		Present W Same	Vell Owner	stone enopping	<u>o o nico</u>	
	(If applicable) Gov't Lot	Grid Number		Street or 1 17689 W	Route /est Bluemo	ound Road		
	Grid Location $ft. \square N. \square S., _$	ft. 🗆 E. 🗆 W.		City, Stat Brookfie	e, Zip Code d, WISCON	ISIN 53045		
	Civil Town Name Brookfield			Facility W MHW-1	/ell No. and/	or Name (If App	licable)	WI Unique Well No.
	Street Address of Well 17680 West Bluemound Road			Reason Fo	or Abandoni ure	nent		
	City, Village Brookfield	and and a second s		Date of A 9/24/01	bandonmen	t		
WEI	L/DRILLHOLE/BOREHOLE INFOR	MATION	L				_	
(3)	Original Well/Drillhole/Borehole Co	onstruction Completed On	(4)	Depth to V	Water (Feet)	NA	1	
10	(Date) 11/18/99 Monitoring Well Compared to the second	onstruction Report Available? Ž Yes □ No		Pump & F Liner(s) R Screen Re Casing Le If No, Exp	iping Remo emoved? moved? ft in Place? lain	ved? Yes Yes Yes Yes Yes You yes	 No No No No 	 Not Applicable Not Applicable Not Applicable
	Construction Type: Drilled Driven (S Other (Specify) <u>Geoprobe</u>	Sandpoint) 🗆 Dug		Was Casir Did Sealir Did Mater If Yes, Wa	ng Cut Off B ng Material I rial Settle Af s Hole Reto	elow Surface? Rise to Surface? ter 24 Hours? pped?	X Yes X Yes Ves Yes Yes	□ No □ No ⊠ No □ No
	Total Borehole Depth (ft) 240	Bedrock	 (5) Required Method of Sealing Material ▲ Conductor Pipe-Gravity □ Dump Bailer □ Other (Explain) 					
	(From ground surface)		(6)	Sealing M	aterials cement Grou	For r t mon	nonitor itoring	ing wells and well boreholes only
	Casing Depth (ft.) 24.0			□ Sand-0 □ Concre	Cement (Con ete	crete) Grout	Bentoni	te Pellets
	Was Well Annular Space Grouted? If Yes, To What Depth?	🗆 Yes 🗴 No 🗴 Unknown Feet		 Clay-S Bentor Chipp 	and Slurry hite-Sand Sh ed Bentonite	XX (arry e	Granula	r Bentonite
(7)	Sealing Materi	ial Used		From (Ft.)	To (Ft.)	No. Yards Sacks Sealant or Volume	Mix R	atio or Mud Weight
	GRANULAR BENTO	DNITE		Surface	24.0	10 LBS		
(8) (9) <u>G</u>	Comments: Name of Person or Firm Doing Seali RAEF ANHALT SCHLOEMER & / Signature of Person Doing Work	ng Work ASSOCIATES, INC. Date Signed		(10) F Date Receiv	OR DNR OI	t COUNTY USE	ONLY District/	County
	Street or Route 25 SOUTH 84TH STREET SUITE	<u>4.2.401</u> Telephone Number 401 (414) 259-1500		Reviewer/I	nspector			
M	City, State, Zip Code ILWAUKEE, WISCONSIN 53214				w			EII E NAME

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.

(1)	GENERAL INFORMATION	· · · · · · · · · · · · · · · · · · ·	(2)	FACILI	ΓΥ ΝΑΜΕ			
	Well/Drillhole/Borehole	County Milwaukee		Original Spic & S	Well Owner	(If Known) stone Shopping	Cente	r
	NW 1/4 of SW 1/4 of Sec. 28	; T. ⁷ N; R. 20 □ w		Present V Same	Vell Owner	<u></u>		
	(If applicable) Gov't Lot	Grid Number		Street or 17689 V	Route Vest Bluemo	ound Road		
	Grid Location ft. □ N. □ S.,	ft. 🗆 E. 🗆 W.		City, Stat Brookfie	e, Zip Code Id, WISCOI	NSIN 53045		
	Civil Town Name Brookfield	Alland and a few of the second se		Facility V MHW-2	Vell No. and	or Name (If App	licable)	WI Unique Well No.
	Street Address of Well 17680 West Bluemound Road			Reason F Site Clos	or Abandoni Sure	ment		
	City, Village Brookfield			Date of A 9/24/01	bandonmen	t		
WEL	L/DRILLHOLE/BOREHOLE INFOR	MATION				······································		· · · · · · · · · · · · · · · · · · ·
(3) 10	Original Well/Drillhole/Borehole Co	onstruction Completed On	(4)	Depth to	Water (Feet)	NA		¥
	(Date) 11/10/35 X Monitoring Well Co Water Well Drillhole Borehole Co	onstruction Report Available? Ž Yes □ No		Pump & I Liner(s) R Screen Re Casing Le If No, Exp	Piping Remo Removed? Proved? Pain Place? Plain	ved? Yes Yes Yes	□ No □ No □ No □ No	 Not Applicable Not Applicable Not Applicable
	Construction Type: □ Drilled □ Driven (S ☑ Other (Specify) <u>Geoprobe</u>	Sandpoint) 🗆 Dug		Was Casin Did Seali Did Mate If Yes, Wa	ng Cut Off B ng Material I rial Settle Af as Hole Reto	elow Surface? Rise to Surface? fter 24 Hours? pped?	X Yes X Yes Yes Yes Yes	□ No □ No ⊠ No □ No
	Formation Type: Unconsolidated Formation Total Borehole Depth (ft.) <u>24.0</u> C	□ Bedrock Casing Diameter (ins.) <u>1.0</u>	(5)	Required A Condu	Method of uctor Pipe-G Bailer	Sealing Material ravity 🗌 (🗌 (Conduct Other (E	tor Pipe-Pumped Explain)
	Casing Depth (ft.) <u>24.0</u> Was Well Annular Space Grouted? If Yes, To What Depth?	□Yes X No X Unknown Feet	(6)	Sealing M Neat C Sand-C Sand-C Concre Clay-S Benton Chipp	laterials Cement Grou Cement (Cor ete Gand Slurry nite-Sand Sli ed Bentonite	For 1 it mon acrete) Grout I F X C urry	nonitor itoring Bentoni Granula	ing wells and well boreholes only te Pellets r Bentonite
(7)	Sealing Materi	ial Used		From (Ft.)	To (Ft.)	No. Yards Sacks Sealant or Volume	Mix R	atio or Mud Weight
	GRANULAR BENTC	DNITE		Surface	24.0	10 LBS		
(8)	Comments:							
(9) <u>G</u>	Name of Person or Firm Doing Seali RAEF ANHALT SCHLOEMER & A	ng Work ASSOCIATES, INC.		(10) F Date Recei	OR DNR OI ved/Inspecte	R COUNTY USE	ONLY District/	County
	Signature of Person Doing Work	Date Signed 9 - 2 - (- 0)		Reviewer/I	nspector			-
12	Street or Route 5 SOUTH 84TH STREET SUITE	Telephone Number 401 (414)259-1500		Follow-up	Necessary			
M	City, State, Zip Code LWAUKEE, WISCONSIN 53214		DN	R/COLINT	Υ			FILE NAME





State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor Darrell Bazzell, Secretary Southeast Region Annex 4041 North Richards Street P.O. Box 12436 Milwaukee, Wisconsin 53212-0436 Telephone 414-229-0800 FAX 414-229-0811

August 14, 2001

Robert Miller Spic & Span, Inc. 4301 North Richards St Milwaukee, WI 53212

Subject: Deed restriction at Dry Clean USA, 17680 West Bluemound Road, file reference FID #268252050 ERR-ERP

Dear Mr. Miller:

I have reviewed your consultants request for the department to drop its deed restriction requirement for closure at this site based on a model run and reported by your consultant, Graefe Anhalt, Schloemer. The department will no longer require a deed restriction as a closure requirement. I will list this case as having final closure status in our database when I receive the well abandonment documentation.

Under NR726.05(4), the department may not close a case where the residual contamination may cause an enforcement standard (ES) exceedance. However, in your model, groundwater contamination caused by the remaining contamination did not exceed the ES at the immediate edge of the contaminated source soils. The model was conservative in that it was run with full rainwater recharge, assuming no cap covered the contaminated area.

Should contaminated soils at the site be disturbed for construction or any other purpose in the future, they must be properly characterized and disposed of. Additionally, the department must be notified at that time.

If you have any questions about this letter, please call me at 414-229-0850.

Sincerely, John Feeney

Wisconsin Department of Natural Resources

Cc: Graefe Anhalt, Schloemer SER File







Graef, Anhalt, Schloemer & Associates, Inc.

Engineers & Scientists

Milwaukee Chicago Green Bay Madison

One Honey Creek Corporate Center 125 South 84" Street, Suite 401 Milwaukee, WI 53214-1470 Telephone (414) 259-1500 • FAX (414) 259-0037 www.gasai.com

May 31, 2001

Mr. John Feeney Wisconsin Department of Natural Resources P.O. Box 12436 Milwaukee, WI 53212

15 JUN 07 2001

SUBJECT: FID #268252050 ERR/ERP, Dryclean USA, 1760 West Bluemound Road, Milwaukee, Wisconsin

Dear John:

Based on our conversation on October 24th, 2000, Graef, Anhalt, Schloemer & Associates, Inc. (GAS) has prepared the following evaluation of the environmental risk associated with the tetrachloroethylene (PCE) remaining in the soils on site. The objective of this evaluation is to obtain site closure. The evaluation is based on the US EPA's unsaturated zone vertical transport model (SESOIL) and the analytical fate and transport model AT123D.

(without a lead restriction) case closed 7/13/00

1.0 EVALUATION MODEL DESCRIPTION

The American Petroleum Institute's (API) Exposure and Risk Assessment Decision Support System software (APIDSS V1.02, 1994) was used to model potential groundwater impacts from the contaminated unsaturated soil (vadose zone) identified beneath the Dryclean USA facility at the Brownstones shopping center. The APIDSS software selected to evaluate potential future groundwater impacts resulting from residual soil contamination were SESOIL and AT123D.

The US EPA's unsaturated soil zone vertical transport model SESOIL (SEasonal SOIL compartment model) was used to approximate site conditions. The model simulates transport of a contaminant through the unsaturated zone. Site-specific data can be input to assess various management scenarios. The purpose of the modeling is to show that groundwater impacts are minimal even if various levels of contaminants remain in place. The SESOIL model was chosen rather than other vadose zone fate and transport models

because of its familiarity and use by the WDNR to establish generic soil cleanup standards for the soils of Wisconsin.

The version of SESOIL included in APIDSS software allows SESOIL to be coupled to the analytical groundwater fate and transport model, AT123D (Analytical Transport: One Two and Three Dimensional Model). The combined model allows one to assess the potential, if any, of residual soil impacts to affect groundwater. The AT123D model allows for site specific information to be input in order to determine what groundwater impacts, if any, could be expected at various distances and times.

Data used as input for SESOIL and AT123D were obtained from recent site work performed by GAS, previous investigations by (Site Investigation Report, McLaren/Hart, March 2, 2000) and the US EPA's User's Manual for their BIOCLOR screening model (USEPA, 2000). Data requirements for these models are presented in Appendix A. GAS collected and analyzed a soil sample for total organic carbon content, and conducted saturated hydraulic conductivity tests using bail-down methods on monitoring wells MWH-1 and MWH-2. These results are presented in Appendix B.

The version of SESOIL included in APIDSS is limited to only four sublayers per layer (other versions allow up to ten sublayers). However, when sublayers are used, the contaminant mass is distributed within only the upper sublayer. In soil columns where the contaminant mass is distributed throughout the entire vadose zone (as is the case in this matter) the use of sublayers tends to underestimate the mass of contaminants within the soil column. As such, no sublayers were used in the simulations.

A soil profile was developed to reflect conditions below the dry cleaning building. The soil profile was conceptualized as a four layer vadose zone 11 feet deep. The four layers were composed of clay sand that had nearly consistent characteristics throughout the soil column (organic carbon content was decreased with depth). Because of the reported presence of granular fill below the building, a depth-weighted permeability was calculated for the soils. The model layer extending from ground surface to 4 feet below ground surface (bgs) (Layer

1) had an average PCE level of 260 ppb. The model layer extending from 4 to 6 feet bgs (Layer 2) has a PCE level of 200 ppb. The model layer extending from 6 to 10 feet bgs (Layer 3) had a PCE level of 75 ppb. The model layer extending from 10 to 11 feet bgs (Layer 4) had a PCE level of 25 ppb (a decrease in concentration by a factor of 2 every two feet below the fill layer).

The lateral extent of the significant soil contaminant plume modeled as described above was estimated at 25 feet wide (7.62 m) by 18 feet long (5.49 m). The significance of these dimensions is the total mass of contaminant added to the flow model per unit time step. Accordingly, the larger the soil prism contributing contaminants to an aquifer, the greater the impact to groundwater from that soil prism. The area of highest groundwater impacts is expected immediately below the area of contaminated soil and just down flow from that area.

Soil permeability was based on a depth-weighted average of bail-down test data collected by GAS, and an assumed conductivity for the granular material in the top four feet (0.01 cm/sec). The depth-weighted average was calculated using the equation specified in the SESOIL users guide. The percent organic carbon was estimated from an analytical result from a soil sample collected adjacent to the dry cleaner building. The value was assumed to decrease with depth by a factor of two every two feet. The bulk density and porosity were assumed based on literature values.

The only compound of significance is tetrachloroethene. The chemical input parameters for tetrachloroethene were obtained from various literature sources except for diffusivity, which was calculated using a method specified in the New SESOIL User's Guide (1993). The biodegradation rate was estimated from literature values, and was set at the slowest rate cited in the US EPA's users guide for the EPA Biochlor model.

The vadose zone profile configuration was based on observations of soil borings. As noted, the number of model layers was set at four (the model maximum) to provide for sufficient

model detail and flexibility. The input parameters used to approximate site conditions are presented in the following table.

LAYER	ONE	TWO	THREE	FOUR
Material	Sand	Clay	Clay	Clay
Thickness (cm)	121.92	60.96	121.92	30.48
Permeability (cm ²)*	1.0 x 10 ⁻⁷	3.3 x 10 ⁻¹¹	3.3 x 10 ⁻¹¹	3.3 x 10 ⁻¹¹
Density (g/cm^3)	1.7	1.7	1.7	1.7
Fraction Organic Carbon	0.07	0.035	0.01325	0.004

PROFILE FOR SUBSURFACE SOILS

* Depth weighted average of 5.2 x10⁻¹¹ cm²

Climate data was obtained for the city of Milwaukee and used to approximate the environs of the site. The required input climate data includes surface temperature,

evapotranspiration, total precipitation, average storm duration, number of storms per year and the length of the rainy season. Infiltration of precipitation for the model was based on the assumption that there was no building on top of the soil profile. In other words, it was assumed that precipitation was 100 percent of the average value. Evapotranspiration was estimated using the public domain version of SESOIL (this version set to run in the monthly time step uses monthly climate data and several additional climatic input parameters). A soil profile identical to the one that would be used in the APIDSS software was calibrated to site moisture content. The resulting value of evapotranspiration was used as input to the APIDSS SESOIL model.

The stand-alone version of AT123D was developed to model one, two or three-dimensional transient transport of contaminants in groundwater (Yeh, 1981). However, the version of AT123D included in APIDSS allows only for transport in a vertical cross section of uniform thickness. The model requires input of the aquifer hydraulic conductivity; horizontal

gradient; longitudinal, transverse and vertical dispersivity; aquifer bulk density; fraction organic carbon in the aquifer and aquifer thickness. The location and geometry of the receptor well can be specified.

The average hydraulic conductivity measured in the bail-down tests on MWH-1 and MWH-2 was used (1.01 m/yr). The horizontal gradient measured across the site at three monitoring wells was input (0.075 m/m). The dispersivities were based on literature values and were set at 0.1 m for longitudinal, 0.01 m for transverse and 0.001 m for vertical. The aquifer bulk density was assumed 1.7 g/cm³. The aquifer was assumed 10 meters thick. The biodegradation rate was assumed to be at the slow end of the range presented in the US EPA's users guide to their screening model Biochlor, and was set at 0.000192 /day.

2.0 RESULTS AND CONCLUSIONS

The results of the SESOIL base model and AT123D model output summary can be found in Appendix C.

Overall, the results show negligible environmental impact attributable to the PCE in the soils on site. The location of the receptor monitoring well was simulated at 5.6 m, immediately adjacent to the source and at 10 m, approximately 15 feet down flow. Model runs were simulated for 50 years. The resulting maximum groundwater concentration modeled at the well located adjacent to the soil contaminants was approximately 0.76 ppb. The resulting maximum groundwater concentration flow from the soil contaminants was approximately 0.76 ppb. The resulting maximum groundwater concentration modeled at a well located 15 feet down flow from the soil contaminants was approximately 0.06 ppb. The groundwater PCE level at the 5.6 m location reached its maximum after 13 years (0.76 ppb) after which it decreased to less than the PAL (0.5 ppb) on year 27, when the level was 0.48 ppb. The maximum level at the 10 m location never exceeded the PAL and was less than the PAL by a factor of almost 10.

The results of the modeling demsonstrate that the remaining soil contamination will not pose a long-term threat to the groundwater quality at the site or areas immediately adjacent to the site. Based on the modeling, the potential for an exceedance of the ES is remote.

Furthermore, the modeling results suggest that the PAL for PCE will not be exceeded off site. Had the models been configured to simulate the effects of the building on the climatic input parameters, the results would have been even lower. Additionally, the PAL is an overly conservative risk standard for the site: it is one-tenth of the EPA drinking water standard, and it is very unlikely that an individual or municipality would attempt to draw drinking water from the tight clay soils underlying the highly developed area of the site.

As noted in the McLaren/Hart report, the potential risk to human health through direct contact with the soils is minimal.

Accordingly, Spic and Span requests that the soils beneath the building remain in place without any regulatory encumbrances, and that closure be granted without requiring a deed restriction.

Please contact Brian Schneider at (414) 266-9284, if you have any questions.

Sincerely,

GRAEF, ANHALT, SCHLOEMER & Associates, Inc.

Brian Schneider, P.E. Project Engineer

Appendices

C: Robert Miller – Spic and Span, Inc. Mark Thimke – Foley & Lardner Dan Prezembel – The RREEF Funds

BWS F:\Spic and Span\ brownstones SESOIL 5-3-01

Geoffrey Parish, P.G., CHMM Project Hydrogeologist

APPENDIX A - MODEL DATA REQUIREMENTS

The following chemicals were selected: Tetrachloroethylene

20

Data for Fate and Transport Models

Sesoil Model - Deterministic

Model Control Parameters	
Simulation Time (max=100) [years]	50
Number of soil layers	4
Sublayers in layer 1	1
Sublayers in layer 2	1
Sublayers in layer 3	1
Sublayers in layer 4	1
Volatile emissions:	Yes
limate Parameters	
Surface Temperature [C]	8.4
Evapotranspiration [cm/day]	0.02667
Precipitation [cm/yr]	79.02
Storm duration [days]	0.4
Number of storms [yr^-1]	58
Length of Rainy Season [months]	12
Soil Column Data	
Effective porosity [-]	0.15
Dry Wt. Soil Bulk Density [g/cm^3]	1.7
X-dimension of the source [m]	5.49
Y-dimension of the source [m]	7.62
Layer 1	
Thickness of Layer [m]	1.2192
Intrinsic Permeability [cm^2]	0.00000000052
Fraction Organic Carbon [-]	0.07
Tetrachloroethylene Load [kg]	0.0225
Layer 2	
Thickness of Layer [m]	0.6096
Intrinsic Permeability [cm^2]	0.00000000052
Fraction Organic Carbon [-]	0.035
Tetrachloroethylene Load [kg]	0.00867
Layer 3	
Thickness of Layer [m]	1.2192
Intrinsic Permeability [cm^2]	0.00000000052
Fraction Organic Carbon [-]	0.01325
Tetrachloroethylene Load [kg]	0.0065
Layer 4	
Thickness of Layer [m]	0.3048
Intrinsic Permeability [cm^2]	0.00000000052
Fraction Organic Carbon [-]	0.004
Tetrachloroethylene Load [kg]	0.00054
Sesoil Chemical Specific Parameters	
Tetrachloroethylene	
Solubility [mg/l]	150
Diffusion Coeff. in Air [cm^2/s]	0.083
Henrys Constant [Atm/m^3/mol]	6.01E-01
Koc [ug/gOC/ug/ml]	426
Degradation Rate Constant in Unsaturated Ze	0.0001923]
Vapor Pressure [mmHg]	17.8
Diffusion Coeff. in Water [cm^2/s]	6.56E-05

AT123D Model - Deterministic

Model Control Parameters

Infinite aquifer (y)

Infinite in depth	No
Simulation Time (years)	50
Aedia Specific Parameters Effective Porosity [-] Hydraulic Conductivity [m/yr] Hydraulic Gradient [-] Longitudinal Dispersivity [m] Transverse Dispersivity [m] Vertical Dispersivity [m] Dry Wt. Soil Bulk Density [g/cm**3] Fraction Organic Carbon [-] Thickness of the aquifer [m]	0.15 1.01 0.075 0.1 0.01 0.001 1.7 0.001 10
Receptor Well Geometry X Coord - of Well [m] Y Coord - of Well [m] Z Coord - Top of Screen [m] Z Coord - Bottom of Screen [m]	5.6 0 0 1
Source Geometry Length of source in X-dir [m] Length of source in Y-dir [m] Thickness of source in Z-dir [m]	
Tetrachloroethylene	
Chemical Specific Parameters for each chemi Tetrachloroethylene KOC [ug/gOC/ug/ml] Degradation Rate Constant in Saturated Zone Molecular Diff Coeff [cm^2/s]	cal 426 0.000192 6.56E-05
Body Weight and Lifetime - Deterministic Average Weight (kg) Lifetime (yrs)	
Drinking Water Exposure Frequency [days/yr] Exposure Duration [years] Ingestion Rate [liters/day]	
Drinking Water Chemical Specific Parameters Tetrachloroethylene Bioavailability [fraction]	;
Oral Dose Tetrachloroethylene Slope Factor [1/(mg/kg-day)] Reference Dose [mg/kg-day]	

APPENDIX B – TOTAL ORGANIC CARBON AND HYDRAULIC CONDUCTIVITY TEST RESULTS

ANALYTICAL AND QUALITY CONTROL REPORT

TestAme

Mr. Brian Schneider GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. 125 S. 84th St. Suite 401 Milwaukee, WI 53214-1470 03/26/2001 Job No: 01.01344 Page 1 of 4

Enclosed are the Analytical and Quality Control reports for the following samples submitted for analysis:

Sample Number	Sample	Description	Date Taken	Date Received
428829	HA-1 4'	2001-0080 Spic & Span	03/07/2001	03/08/2001

Soil results are reported on a dry weight basis. The above sample(s) may have a result flag shown on the report. The following are the result flag definitions:

- A = Analyzed/extracted past hold time
- C = Standard outside of control limits
- F = Sample filtered in lab
- H = Late eluting hydrocarbons present
- J = Estimated concentration
- M = Matrix interference
- Q = Result confirmed via re-analysis
- T = Does not match typical pattern
- X = Unidentified compound(s) present

- B = Blank is contaminated
- D = Diluted for analysis
- G = Received past hold time
- I = Improperly handled sample
- L = Common lab solvent and contaminant
- P = Improperly preserved sample
- S = Sediment present
- W = BOD re-set due to missed dilution
- Z = Internal standard outside limits

XP

Karèn R. Wenta Inorganic Operations Manager

ANALYTICAL REPORT

Test/America

Mr. Brian Schneider GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. 125 S. 84th St. Suite 401 Milwaukee, WI 53214-1470

.

03/26/2001 Job No: 01.01344 Sample No: 428829 Account No: 32700 Page 2 of 4

JOB DESCRIPTION: 2001-0080 Spic and Span PROJECT DESCRIPTION: Soil Analysis SAMPLE DESCRIPTION: HA-1 4' 2001-0080 Spic & Span 17680 W. Bluemound Road; Brookfield, WI Rec'd on ice

Date/Time Taken: 03/07/2001 11:30 Date Received: 03/08/2001

	Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Prep/Run Batch
lds,	Total	83.2 70,000	% mg∕kg	n/a 50	SW 5030 SW 9060	03/14/2001 03/22/2001	3586 303



QUALITY CONTROL REPORT BLANKS

03/26/2001

Mr. Brian Schneider GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. 125 S. 84th St. Suite 401 Milwaukee, WI 53214-1470

. . . . _ . _ . . .

Job No: 01.01344 Account No: 32700

Page 3 of 4

Job Description: 2001-0080 Spic and Span

Parameter	Prep Batch	Run Batch	Blank Result	Reporting Limit	Units
roc		303	<50	50	mg/kg

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d



QUALITY CONTROL REPORT DUPLICATES

03/26/2001

Mr. Brian Schneider GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. 125 S. 84th St. Suite 401 Milwaukee, WI 53214-1470

Job No: 01.01344 Account No: 32700

Page 4 of 4

Job Description: 2001-0080 Spic and Span

Parameter	Prep Batch Number	Run Batch Number	Sample Value	Duplicate Value	Units	RPD	Control Limit
Solids, Total		3586	21.6	24.2	*	11.4	
Solids, Total		3586	77.3	76.6	8	0.9	





BASE SESOIL MODEL RUN

SESOIL Summarized Output File Analysis for ... Chemicals in the analysis retrachloroethylene Number of years simulated: 50 RUN NO. 1 GENERAL INPUT PARAMETERS -- CLIMATIC AND HYDROLGIC INPUT PARAMETERS --8.40 'EMPERATURE (DEG C): .267E-01 EVAPOTRANSPIRATION (CM/DAY): ANNUAL PRECIPITATION (CM): 79.0 IEAN TIME OF RAIN (DAYS): .400 58.0 1EAN NUMBER OF STORM EVENTS (-): MEAN LENGTH OF RAINY SEASON (MONTHS): 12.0 -- SOIL INPUT PARAMETERS --1.70 SOIL DENSITY (G/CM**3): 7.00 DISCONNECTEDNESS INDEX (-): POROSITY (-): .150 DRGANIC CARBON CONTENT (%): 7.00 -- APPLICATION INPUT PARAMETERS --NUMBER OF SOIL LAYERS: 4 50 YEARS TO BE SIMULATED: AREA (CM**2): .418E+06 .12E+03 61. .12E+03 31. 1 1 1 1 1 DEPTHS (CM): NUMBER OF SUBLAYERS/LAYER .52E-10 .52E-10 .52E-10 .52E-10 INTRINSIC PERMEABILITIES (CM**2): Tetrachloroethylene -- CHEMICAL INPUT PARAMETERS FOR -- Tetrachloroethylene SOLUBILITY (UG/ML): 150. .830E-01 DIFFUSION COEFFICIENT IN AIR (CM**2/SEC): HENRYS LAW CONSTANT [(mg/L)/(mg/L)]: .601 ADSORPTION COEFFICIENT ON ORGANIC CARBON(KOC): 426. DVERALL DEGRADATION RATE (/DAY): .192E-03 *** WARNING - PROBLEM IN HYDRO CYCLE: W EQUALS OR EXCEEDS EP W SET TO EP YEAR - 1 ANNUAL SUMMARY REPORT ______ Tetrachloroethylene -- TOTAL INPUTS (UG) --JPPER SOIL ZONE 2.217E+07 SOIL ZONE 2 8.367E+06 SOIL ZONE 3 6.275E+06 LOWER SOIL ZONE 4.183E+05 -- HYDROLOGIC CYCLE COMPONENTS --AVERAGE SOIL MOISTURE ZONE 1 (%) 12.167 VERAGE SOIL MOISTURE BELOW ZONE 1 (%) 12.167 COTAL PRECIPITATION (CM) 75.049 TOTAL INFILTRATION (CM) 20.881 TOTAL EVAPOTRANSPIRATION (CM) 9.772 54.169 COTAL SURFACE RUNOFF (CM)

11.108

POTAL GRW RUNOFF (CM)

.000 TOTAL MOISTURE RETENTION (CM) 'OTAL YIELD (CM) 65.277 -- AVERAGE POLLUTANT CONCENTRATIONS ---- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --UPPER SOIL ZONE: SUBLAYER 1 _____ OIL MOISTURE (UG/ML)8.198E-03DSORBED SOIL (UG/G)2.445E-01SOIL AIR (UG/ML)4.927E-03 SOIL AIR (UG/ML) JBLAYER 1
 SOIL MOISTURE (UG/ML)
 1.193E-02

 ADSORBED SOIL (UG/G)
 1.779E-01

 OIL AIR (UG/ML)
 7.170E-03
 SUBLAYER 1 SOIL MOISTURE (UG/ML)1.222E-02ADSORBED SOIL (UG/G)6.871E-02SOIL AIR (UG/ML)7.344E-03 2000 LOWER SOIL ZONE: SÚBLAYER 1 _____ SOIL MOISTURE (UG/ML)1.125E-02ADSORBED SOIL (UG/G)1.918E-02SOIL AIR (UG/ML)6.763E-03 Mass loading to gw (kg) in year 1 is = .000 YEAR - 2 ANNUAL SUMMARY REPORT Tetrachloroethylene -- HYDROLOGIC CYCLE COMPONENTS --AVERAGE SOIL MOISTURE ZONE 1 (%) 12.167 AVERAGE SOIL MOISTURE BELOW ZONE 1 (%) 12.167 POTAL PRECIPITATION (CM) 75.049 TOTAL INFILTRATION (CM) 20.881 TOTAL EVAPOTRANSPIRATION (CM) 9.772 COTAL SURFACE RUNOFF (CM) 54.169 TOTAL GRW RUNOFF (CM) 11.108 TOTAL MOISTURE RETENTION (CM) .000 TOTAL YIELD (CM) 65.277 -- AVERAGE POLLUTANT CONCENTRATIONS ---- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --UPPER SOIL ZONE: JBLAYER 1 SOIL MOISTURE (UG/ML)7.598E-03ADSORBED SOIL (UG/G)2.266E-01SOIL AIR (UG/ML)4.566E-03 SUBLAYER 1 >OIL MOISTURE (UG/ML)1.048E-02ADSORBED SOIL (UG/G)1.563E-01SOIL AIR (UG/ML)6.299E-03 6.299E-03 SOIL AIR (UG/ML)

1

JBLAYER

~						
	OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.137E-02 6.394E-02 6.834E-03				
	LOWER SOIL ZONE:					
St) JBLAYER	1				
(OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.151E-02 1.961E-02 6.918E-03				
	Mass loading to gw (kg)	in year	2 ±	is :	= .(000
		YEAR -		3 AI	NNUAL	SUMMARY REPORT
				,	Tet	crachloroethylene
	HYDROLOGIC C	CYCLE COMPO	ONEI	ITS		
r r	VERAGE SOIL MOISTURE ZON VERAGE SOIL MOISTURE BEI FOTAL PRECIPITATION (CM) FOTAL INFILTRATION (CM) OTAL EVAPOTRANSPIRATION OTAL SURFACE RUNOFF (CM) FOTAL GRW RUNOFF (CM) FOTAL MOISTURE RETENTION TOTAL YIELD (CM)	NE 1 (%) LOW ZONE 1 (CM) (CM)	(8)	1		$12.167 \\ 12.167 \\ 75.049 \\ 20.881 \\ 9.772 \\ 54.169 \\ 11.108 \\ .000 \\ 65.277 $
	NOTE: ONLY NON UPPER SOIL ZONE:	I-ZERO VALU	JES	ARI	E PRIN	VTED
5	JBLAYER	1				
'n	SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	7.016E-03 2.092E-01 4.217E-03				
~	IBLAYER	1				
1	SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML)	9.334E-03 1.392E-01 5.610E-03				
ب	JBLAYER	1				
,	SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.058E-02 5.949E-02 6.358E-03				
	LOWER SOIL ZONE:					
•	JBLAYER	1				
•	SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.077E-02 1.835E-02 6.473E-03				
	Mass loading to gw (kg)	in year	3 :	is :	= .(000
	400-mm	YEAR -		1 Al	NNUAL	SUMMARY REPORT
					Tet	trachloroethylene
	AVERAGE POLI	LUTANT CONC	CEN'	ΓRΑ΄	FIONS	

-- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

SUBLAYER	1	
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	6.465E-03 1.928E-01 3.885E-03	
BLAYER	1	
SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) OIL AIR (UG/ML)	8.393E-03 1.251E-01 5.044E-03	
SUBLAYER	1	
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	9.803E-03 5.512E-02 5.892E-03	
LOWER SOIL ZONE:		
SUBLAYER	1	
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	9.985E-03 1.701E-02 6.001E-03	
Mass loading to gw (kg)	in year 4 is = .000	
	YEAR - 5 ANNUAL SUMMARY REPORT	
	Tetrachloroethylene	
AVERAGE POL NOTE: ONLY NO	LUTANT CONCENTRATIONS N-ZERO VALUES ARE PRINTED	
UPPER SOIL ZONE:		
UPPER SOIL ZONE:	1	
UPPER SOIL ZONE: JBLAYER OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	1 5.948E-03 1.774E-01 3.575E-03	
UPPER SOIL ZONE: JBLAYER JOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	1 5.948E-03 1.774E-01 3.575E-03 1	
UPPER SOIL ZONE: JBLAYER OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) OIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03	
UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03 1	
UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03 1 9.029E-03 5.077E-02 5.427E-03	
UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE:	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03 1 9.029E-03 5.077E-02 5.427E-03	
UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE: JBLAYER	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03 1 9.029E-03 5.077E-02 5.427E-03 1	
UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) SUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03 1 9.029E-03 5.077E-02 5.427E-03 1 9.081E-03 1.547E-02 5.458E-03	
UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) SUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE: JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) Mass loading to gw (kg)	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03 1 9.029E-03 5.077E-02 5.427E-03 1 9.081E-03 1.547E-02 5.458E-03 in year 5 is = .422E-04	
UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) SUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE: JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) Mass loading to gw (kg)	1 5.948E-03 1.774E-01 3.575E-03 1 7.598E-03 1.133E-01 4.567E-03 1 9.029E-03 5.077E-02 5.427E-03 1 9.081E-03 1.547E-02 5.458E-03 in year 5 is = .422E-04 YEAR - 10 ANNUAL SUMMARY REPORT	

UPPER SOIL ZONE:

SUBLAYER	1
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	3.881E-03 1.157E-01 2.333E-03
, JBLAYER	1
SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) OIL AIR (UG/ML)	4.794E-03 7.148E-02 2.881E-03
SUBLAYER	1
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	5.764E-03 3.241E-02 3.464E-03
LOWER SOIL ZONE:	
SUBLAYER	1
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	5.788E-03 9.862E-03 3.478E-03
Mass loading to gw (kg)	in year 10 is = .269E-04
	YEAR - 15 ANNUAL SUMMARY REPORT
	Tetrachloroethylene
AVERAGE POL	LUTANT CONCENTRATIONS
NOTE: ONLY NO	N-ZERO VALUES ARE PRINTED
NOTE: ONLY NO	N-ZERO VALUES ARE PRINTED
NOTE: ONLY NOTUPPER SOIL ZONE:	N-ZERO VALUES ARE PRINTED 1
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	N-ZERO VALUES ARE PRINTED 1 2.516E-03 7.503E-02 1.512E-03
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	N-ZERO VALUES ARE PRINTED 1 2.516E-03 7.503E-02 1.512E-03 1
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1 2.516E-03 7.503E-02 1.512E-03 1 3.077E-03 4.588E-02 1.849E-03
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1 2.516E-03 7.503E-02 1.512E-03 1 3.077E-03 4.588E-02 1.849E-03 1
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	1 2.516E-03 7.503E-02 1.512E-03 1 3.077E-03 4.588E-02 1.849E-03 1 3.680E-03 2.069E-02 2.211E-03
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE:	1 2.516E-03 7.503E-02 1.512E-03 1 3.077E-03 4.588E-02 1.849E-03 1 3.680E-03 2.069E-02 2.211E-03
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE: JBLAYER	1 2.516E-03 7.503E-02 1.512E-03 1 3.077E-03 4.588E-02 1.849E-03 1 3.680E-03 2.069E-02 2.211E-03
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE: JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML)	1 2.516E-03 7.503E-02 1.512E-03 1 3.077E-03 4.588E-02 1.849E-03 1 3.680E-03 2.069E-02 2.211E-03 1 3.694E-03 6.295E-03 2.220E-03
NOTE: ONLY NOT UPPER SOIL ZONE: JBLAYER GOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) CUBLAYER JOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML) JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) LOWER SOIL ZONE: JBLAYER SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) JOIL AIR (UG/ML) Mass loading to gw (kg)	1 2.516E-03 7.503E-02 1.512E-03 1 3.077E-03 4.588E-02 1.849E-03 1 3.680E-03 2.069E-02 2.211E-03 1 3.694E-03 6.295E-03 2.220E-03 in year 15 is = .172E-04

Tetrachloroethylene

-- AVERAGE POLLUTANT CONCENTRATIONS ---- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --

UPPER SOIL ZONE:

SUBLAYER	1
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.627E-03 4.852E-02 9.780E-04
IBLAYER	1
SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) OIL AIR (UG/ML)	1.980E-03 2.953E-02 1.190E-03
SUBLAYER	1
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	2.357E-03 1.325E-02 1.416E-03
LOWER SOIL ZONE:	
SUBLAYER	1
OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	2.366E-03 4.032E-03 1.422E-03
Mass loading to gw (kg) in year 20 is = .110E-04
197 vanuelle	YEAR - 25 ANNUAL SUMMARY REPORT
AVERAGE PO NOTE: ONLY N UPPER SOIL ZONE:	LLUTANT CONCENTRATIONS ON-ZERO VALUES ARE PRINTED
. JBLAYER	1
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) OIL AIR (UG/ML)	1.051E-03 3.134E-02 6.316E-04
SUBLAYER	1
OIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.276E-03 1.902E-02 7.666E-04
JBLAYER	1
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.513E-03 8.508E-03 9.094E-04
LOWER SOIL ZONE:	
JBLAYER	1
COTI MOTOPULDE (IC/MT)	

Mass loading to gw (kg) in year 25 is = .706E-05 YEAR - 30 ANNUAL SUMMARY REPORT _____ Tetrachloroethylene -- AVERAGE POLLUTANT CONCENTRATIONS ---- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --UPPER SOIL ZONE: JBLAYER 1 , __________ SOIL MOISTURE (UG/ML)6.784E-04DSORBED SOIL (UG/G)2.023E-02OIL AIR (UG/ML)4.077E-04 SUBLAYER 1 _____ OIL MOISTURE (UG/ML)8.219E-04ADSORBED SOIL (UG/G)1.225E-02SOIL AIR (UG/ML)4.940E-04 JBLAYER 1 SOIL MOISTURE (UG/ML)9.729E-04DSORBED SOIL (UG/G)5.471E-03OIL AIR (UG/ML)5.847E-04 LOWER SOIL ZONE: JBLAYER 1
 SOIL MOISTURE (UG/ML)
 9.767E-04

 NDSORBED SOIL (UG/G)
 1.664E-03

 OIL AIR (UG/ML)
 5.870E-04
 Mass loading to gw (kg) in year 30 is = .454E-05 YEAR - 35 ANNUAL SUMMARY REPORT Tetrachloroethylene -- AVERAGE POLLUTANT CONCENTRATIONS ---- NOTE: ONLY NON-ZERO VALUES ARE PRINTED --UPPER SOIL ZONE: JBLAYER 1 _____ _____
 SOIL MOISTURE (UG/ML)
 4.377E-04

 ADSORBED SOIL (UG/G)
 1.305E-02

 OIL AIR (UG/ML)
 2.630E-04
 SUBLAYER 1 ______ OIL MOISTURE (UG/ML)5.298E-04DSORBED SOIL (UG/G)7.899E-03SOIL AIR (UG/ML)3.184E-04 SOIL AIR (UG/ML) JBLAYER 1 SOIL MOISTURE (UG/ML)6.264E-04ADSORBED SOIL (UG/G)3.522E-03SOIL AIR (UG/ML)3.764E-04 SOIL AIR (UG/ML) 3.764E-04 LOWER SOIL ZONE: JBLAYER 1 _____

DSORBED SOIL (UG/G) OIL AIR (UG/ML)	6.288E-04 1.071E-03 3.779E-04
Mass loading to gw (kg)	in year 35 is = .292E-05
	YEAR – 40 ANNUAL SUMMARY REPORT ====================================
AVERAGE POL NOTE: ONLY NO	LUTANT CONCENTRATIONS N-ZERO VALUES ARE PRINTED
UPPER SOIL ZONE:	
JBLAYER	1
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) OIL AIR (UG/ML)	2.823E-04 8.418E-03 1.697E-04
SUBLAYER	1
OIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML)	3.415E-04 5.092E-03 2.052E-04
JBLAYER	1
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) OIL AIR (UG/ML)	4.035E-04 2.269E-03 2.425E-04
LOWER SOIL ZONE:	
JBLAYER	1
SOIL MOISTURE (UG/ML)	4.050E-04
DSORBED SOIL (UG/G) OIL AIR (UG/ML)	6.901E-04 2.434E-04
DSORBED SOIL (UG/G) SOIL AIR (UG/ML) Mass loading to gw (kg)	6.901E-04 2.434E-04 in year 40 is = .188E-05
DSORBED SOIL (UG/G) OIL AIR (UG/ML) Mass loading to gw (kg)	6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT ====================================
DSORBED SOIL (UG/G) SOIL AIR (UG/ML) Mass loading to gw (kg) AVERAGE POL NOTE: ONLY NO	6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT ====================================
DSORBED SOIL (UG/G) SOIL AIR (UG/ML) Mass loading to gw (kg) AVERAGE POL NOTE: ONLY NO UPPER SOIL ZONE:	6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT ======================== Tetrachloroethylene LUTANT CONCENTRATIONS N-ZERO VALUES ARE PRINTED
DSORBED SOIL (UG/G) OIL AIR (UG/ML) Mass loading to gw (kg) AVERAGE POL NOTE: ONLY NO UPPER SOIL ZONE: JBLAYER	6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT ======================== Tetrachloroethylene LUTANT CONCENTRATIONS N-ZERO VALUES ARE PRINTED
DSORBED SOIL (UG/G) OIL AIR (UG/ML) Mass loading to gw (kg) AVERAGE POL NOTE: ONLY NO UPPER SOIL ZONE: IBLAYER SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) OIL AIR (UG/ML)	<pre>6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT ====================================</pre>
DSORBED SOIL (UG/G) OIL AIR (UG/ML) Mass loading to gw (kg) AVERAGE POL NOTE: ONLY NO UPPER SOIL ZONE: ; JBLAYER SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) OIL AIR (UG/ML) SUBLAYER	6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT
DSORBED SOIL (UG/G) OIL AIR (UG/ML) Mass loading to gw (kg) AVERAGE POL NOTE: ONLY NO UPPER SOIL ZONE: UPPER SOIL ZONE: IBLAYER SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) OIL AIR (UG/ML) SOIL AIR (UG/ML) SOIL AIR (UG/ML)	6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT
DSORBED SOIL (UG/G) OIL AIR (UG/ML) Mass loading to gw (kg) AVERAGE POL NOTE: ONLY NO UPPER SOIL ZONE: UPPER SOIL ZONE: SOIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) OIL AIR (UG/ML) SUBLAYER OIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML) IBLAYER	6.901E-04 2.434E-04 in year 40 is = .188E-05 YEAR - 45 ANNUAL SUMMARY REPORT

LOWER SOIL ZONE:		
; /BLAYER	1	
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) OIL AIR (UG/ML)	2.610E-04 4.447E-04 1.568E-04	
Mass loading to gw (kg)	in year 45 is = .121E-05	
	YEAR - 50 ANNUAL SUMMARY REPORT ====================================	
AVERAGE POL NOTE: ONLY NO	LUTANT CONCENTRATIONS N-ZERO VALUES ARE PRINTED	
UPPER SOIL ZONE:		
BLAYER	1	
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) OIL AIR (UG/ML)	1.174E-04 3.500E-03 7.055E-05	
SUBLAYER	1	
OIL MOISTURE (UG/ML) ADSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.419E-04 2.116E-03 8.529E-05	
JBLAYER	1	
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.675E-04 9.422E-04 1.007E-04	
LOWER SOIL ZONE:		
JBLAYER	1	
SOIL MOISTURE (UG/ML) DSORBED SOIL (UG/G) SOIL AIR (UG/ML)	1.682E-04 2.866E-04 1.011E-04	
Mass loading to gw (kg)	in year 50 is = .782E-06	
**EXECUTION COMPLETED F	OR RUN NO. 1 - Tetrachloroethylene *	* * *

AT123D MODEL RUN Receptor Well At 5.6 Meters

AT123D Output File alysis for ... Chemicals in the analysis Tetrachloroethylene Jumber of years simulated: 50 ENERAL INPUT DATA ****** NO. OF POINTS IN X-DIRECTION 1 NO. OF POINTS IN Y-DIRECTION 1 NO. OF POINTS IN Z-DIRECTION 10 NO. OF ROOTS: NO. OF SERIES TERMS 1000 NO. OF BEGINNING TIME STEPS 1 NO. OF ENDING TIME STEP 50 1 NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE 1 SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE 50 INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT 1 CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD 2 AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS)1000E+02 AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS)0000E+00 .0000E+00 BEGIN POINT OF X-SOURCE LOCATION (METERS) END POINT OF X-SOURCE LOCATION (METERS)5490E+01 BEGIN POINT OF Y-SOURCE LOCATION (METERS)0000E+00 END POINT OF Y-SOURCE LOCATION (METERS)7620E+01 BEGIN POINT OF Z-SOURCE LOCATION (METERS)0000E+00 END POINT OF Z-SOURCE LOCATION (METERS)0000E+00 POROSITY1500E+00 HYDRAULIC CONDUCTIVITY (METER/YEAR)1010E+01 .7500E-01 HYDRAULIC GRADIENT LONGITUDINAL DISPERSIVITY (METER)1000E+00 LATERAL DISPERSIVITY (METER)1000E-01 VERTICAL DISPERSIVITY (METER)1000E-02 BULK DENSITY OF THE SOIL (KG/M**3)1700E+04 TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (YR) .. .1000E+01 DISCHARGE TIME (YR)5000E+02 NPUT DATA/RESULTS FOR CHEMICAL: Tetrachloroethylene INST. WASTE RELEASE (KG) VALID FOR INST CASE ONLY.. .1000E+01 DISTRIBUTION COEFFICIENT, KD (M**3/KG)4260E-03 MOLECULAR DIFFUSION COEFFICIENT (M**2/YR) .2069E+00 DECAY CONSTANT (1/YR).... .7008E-01 LIST OF TRANSIENT SOURCE RELEASE RATE .422E-04 .000E+00 .000E+00 .000E+00 .000E+00 .385E-04 .352E-04 .322E-04 .294E-04 .269E-04

 .352E-04
 .322E-04
 .294E-04

 .225E-04
 .205E-04
 .188E-04

 .144E-04
 .131E-04
 .120E-04

 .921E-05
 .843E-05
 .771E-05

 .591E-05
 .541E-05
 .496E-05

 .381E-05
 .348E-05
 .319E-05

 .245E-05
 .224E-05
 .206E-05

 .158E-05
 .145E-05
 .132E-05

 .246E-04 .172E-04 .157E-04 .110E-04 .101E-04 .706E-05 .646E-05 .454E-05 .292E-05 .416E-05 .268E-05 .188E-05 .132E-05 .172E-05 .121E-05 .853E-06 .102E-05 .932E-06 .111E-05 RETARDED LONGITUDINAL DISPERSION COEF. (M**2/YR) .. .2453E+00 RETARDED LATERAL DISPERSION COEFFICIENT (M**2/YR) . .2375E+00 RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/YR). -2367E+00time [yr] = 1.00.00E+00 conc [mg/1] = .11E+00 conc [mg/1] = .000E+00 z [m] =.000E+00 z [m] = .22E+00 .000E+00 z [m] = conc [mg/1] =z [m] = .33E+00 conc [mg/1] =
conc [mg/1] = .000E+00

.000E+00

z [m] =

.44E+00

z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/l] = .000E+00 conc [mg/l] = .000E+00 conc [mg/l] = .000E+00 conc [mg/l] = .000E+00 conc [mg/l] = .000E+00</pre>
avg. conc. [mg/l] =	.000E+00
time [yr] = 5.00	
z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/l] = .000E+00 conc [mg/l] = .000E+00</pre>
avg. conc. [mg/l] =	.000E+00
time [yr] = 10.0	
z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/l] = .748E-03 conc [mg/l] = .743E-03 conc [mg/l] = .729E-03 conc [mg/l] = .706E-03 conc [mg/l] = .675E-03 conc [mg/l] = .637E-03 conc [mg/l] = .596E-03 conc [mg/l] = .551E-03 conc [mg/l] = .505E-03 conc [mg/l] = .458E-03</pre>
avg. conc. [mg/l] =	.635E-03
time [yr] = 15.0	
z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/l] = .854E-03 conc [mg/l] = .850E-03 conc [mg/l] = .837E-03 conc [mg/l] = .816E-03 conc [mg/l] = .789E-03 conc [mg/l] = .757E-03 conc [mg/l] = .720E-03 conc [mg/l] = .680E-03 conc [mg/l] = .639E-03 conc [mg/l] = .598E-03</pre>
<pre>z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01 avg. conc. [mg/1] =</pre>	<pre>conc [mg/l] = .854E-03 conc [mg/l] = .850E-03 conc [mg/l] = .837E-03 conc [mg/l] = .816E-03 conc [mg/l] = .789E-03 conc [mg/l] = .757E-03 conc [mg/l] = .720E-03 conc [mg/l] = .680E-03 conc [mg/l] = .639E-03 conc [mg/l] = .598E-03</pre>
<pre>z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01 avg. conc. [mg/1] =</pre>	<pre>conc [mg/1] = .854E-03 conc [mg/1] = .850E-03 conc [mg/1] = .837E-03 conc [mg/1] = .816E-03 conc [mg/1] = .789E-03 conc [mg/1] = .757E-03 conc [mg/1] = .720E-03 conc [mg/1] = .680E-03 conc [mg/1] = .639E-03 conc [mg/1] = .598E-03</pre>
<pre>z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .67E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .10E+01 avg. conc. [mg/1] = time [yr] = 20.0 z [m] = .11E+00 z [m] = .11E+00 z [m] = .33E+00 z [m] = .33E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .78E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01</pre>	<pre>conc [mg/1] = .854E-03 conc [mg/1] = .850E-03 conc [mg/1] = .837E-03 conc [mg/1] = .816E-03 conc [mg/1] = .757E-03 conc [mg/1] = .757E-03 conc [mg/1] = .720E-03 conc [mg/1] = .639E-03 conc [mg/1] = .598E-03</pre> .754E-03.754E-03
z [m] = .00E+00 $z [m] = .11E+00$ $z [m] = .22E+00$ $z [m] = .33E+00$ $z [m] = .44E+00$ $z [m] = .56E+00$ $z [m] = .78E+00$ $z [m] = .78E+00$ $z [m] = .10E+01$ avg. conc. [mg/1] = $time [yr] = 20.0$ $z [m] = .11E+00$ $z [m] = .11E+00$ $z [m] = .33E+00$ $z [m] = .33E+00$ $z [m] = .44E+00$ $z [m] = .56E+00$ $z [m] = .78E+00$ $z [m] = .10E+01$ $avg. conc. [mg/1] =$	<pre>conc [mg/1] = .854E-03 conc [mg/1] = .850E-03 conc [mg/1] = .816E-03 conc [mg/1] = .789E-03 conc [mg/1] = .779E-03 conc [mg/1] = .720E-03 conc [mg/1] = .680E-03 conc [mg/1] = .639E-03 conc [mg/1] = .598E-03 .754E-03</pre>
<pre>z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .67E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .10E+01 avg. conc. [mg/1] = time [yr] = 20.0 z [m] = .11E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .33E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .78E+00 z [m] = .10E+01 avg. conc. [mg/1] =</pre>	<pre>conc [mg/1] = .854E-03 conc [mg/1] = .850E-03 conc [mg/1] = .816E-03 conc [mg/1] = .789E-03 conc [mg/1] = .757E-03 conc [mg/1] = .720E-03 conc [mg/1] = .639E-03 conc [mg/1] = .639E-03 conc [mg/1] = .598E-03 .754E-03</pre>
z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/l] = .582E-03 conc [mg/l] = .576E-03 conc [mg/l] = .567E-03 conc [mg/l] = .554E-03 conc [mg/l] = .539E-03 conc [mg/l] = .521E-03 conc [mg/l] = .503E-03 conc [mg/l] = .483E-03 conc [mg/l] = .462E-03</pre>
--	--
avg. conc. [mg/1] =	.537E-03
time [yr] = 30.0	
z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/1] = .431E-03 conc [mg/1] = .430E-03 conc [mg/1] = .427E-03 conc [mg/1] = .421E-03 conc [mg/1] = .414E-03 conc [mg/1] = .405E-03 conc [mg/1] = .394E-03 conc [mg/1] = .383E-03 conc [mg/1] = .370E-03 conc [mg/1] = .357E-03</pre>
avg. conc. [mg/l] =	.403E-03
time [yr] = 35.0	
z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/l] = .320E-03 conc [mg/l] = .319E-03 conc [mg/l] = .317E-03 conc [mg/l] = .313E-03 conc [mg/l] = .307E-03 conc [mg/l] = .301E-03 conc [mg/l] = .293E-03 conc [mg/l] = .285E-03 conc [mg/l] = .276E-03 conc [mg/l] = .267E-03</pre>
avg. conc. [mg/l] =	.300E-03
time [yr] = 40.0	
	<pre>conc [mg/1] = .225E-03 conc [mg/1] = .225E-03 conc [mg/1] = .223E-03 conc [mg/1] = .221E-03 conc [mg/1] = .218E-03 conc [mg/1] = .214E-03 conc [mg/1] = .209E-03 conc [mg/1] = .204E-03 conc [mg/1] = .199E-03 conc [mg/1] = .193E-03</pre>
avg. conc. [mg/l] =	.213E-03
time [yr] = 45.0	
z [m] = .00E+00 z [m] = .11E+00 z [m] = .22E+00 z [m] = .33E+00 z [m] = .44E+00 z [m] = .56E+00 z [m] = .67E+00 z [m] = .78E+00 z [m] = .89E+00 z [m] = .10E+01	<pre>conc [mg/l] = .161E-03 conc [mg/l] = .160E-03 conc [mg/l] = .159E-03 conc [mg/l] = .157E-03 conc [mg/l] = .155E-03 conc [mg/l] = .152E-03 conc [mg/l] = .149E-03 conc [mg/l] = .145E-03 conc [mg/l] = .142E-03 conc [mg/l] = .142E-03</pre>
avg. conc. [mg/l] =	.152E-03

time [yr] = 50.0

z	[m]	=	.00E+00	conc	[mg/l]	Ξ	.110E-03
z	[m]	=	.11E+00	conc	[mg/l]	=	.110E-03
z	[m]	=	.22E+00	conc	[mg/l]	=	.110E-03
Z	[m]	=	.33E+00	conc	[mg/l]	=	.108E-03
z	[m]	=	.44E+00	conc	[mg/l]	=	.107E-03
z	[m]	=	.56E+00	conc	[mg/l]	=	.105E-03
Z	[m]	=	.67E+00	conc	[mg/l]	=	.103E-03
Z	[m]	=	.78E+00	conc	[mg/l]	=	.101E-03
z	[m]	=	.89E+00	conc	[mg/l]	=	.990E-04
z	[m]	=	.10E+01	conc	[mg/l]	=	.965E-04

avg. conc. [mg/1] = .105E-03

==Reading Input File NUMBER OF YEARS SIMULATED: 50 ==Initializing Data

Deterministic Run

SIMULATION FOR CHEMICAL Tetrachloroethylene Run number 1

calling sesoil	
HYDRO CYCLE MONTH- 1	
HYDRO CYCLE MONTH- 2	
HYDRO CYCLE MONTH- 3	
HYDRO CYCLE MONTH- 4	
HYDRO CYCLE MONTH- 5	
HYDRO CYCLE MONTH- 6	
HYDRO CYCLE MONTH- 7	
HYDRO CYCLE MONTH- 8	
HYDRO CYCLE MONTH- 9	
HYDRO CYCLE MONTH- 10	
HYDRO CYCLE MONTH- 11	
HYDRO CYCLE MONTH- 12	
Mass loading to $gw(kg)$ in year 1 is =	.000
Mass loading to $gw(kg)$ in year 2 is =	.000
Mass loading to $gw(kg)$ in year 3 is =	.000
Mass loading to $gw(kg)$ in year 4 is =	.000
Mass loading to $gw(kg)$ in year 5 is =	.422E-04
Mass loading to $gw(kg)$ in year 6 is =	.385E-04
Mass loading to $gw(kg)$ in year 7 is =	.352E-04
Mass loading to $gw(kg)$ in year 8 is =	.322E-04
Mass loading to $gw(kg)$ in year 9 is =	.294E-04
Mass loading to $gw(kg)$ in year 10 is =	.269E-04
Mass loading to $gw(kg)$ in year 11 is =	.246E-04
Mass loading to $gw(kg)$ in year 12 is =	.225E-04
Mass loading to $gw(kg)$ in year 13 is =	.205E-04
Mass loading to $gw(kg)$ in year 14 is =	.188E-04
Mass loading to $gw(kg)$ in year 15 is =	.172E-04
Mass loading to $gw(kg)$ in year 16 is =	.157E-04
Mass loading to $gw(kg)$ in year 17 is =	.144E-04
Mass loading to $gw(kg)$ in year 18 is =	.131E-04
Mass loading to $gw(kg)$ in year 19 is =	.120E-04
Mass loading to gw (kg) in year 20 is =	.110E-04
Mass loading to gw (kg) in year 21 is =	.101E-04
Mass loading to gw (kg) in year 22 is =	.921E-05
Mass loading to $gw(kg)$ in year 23 is =	.843E-05
Mass loading to $gw(kg)$ in year 24 is =	.771E-05

Mass loading to $gw(kg)$ in year 25 is =	.706E-05
Mass loading to $gw(kg)$ in year 26 is =	.646E-05
Mass loading to $gw(kg)$ in year 27 is =	.591E-05
Mass loading to $gw(kg)$ in year 28 is =	.541E-05
Mass loading to $gw(kg)$ in year 29 is =	.496E-05
Mass loading to $gw(kg)$ in year 30 is =	.454E-05
Mass loading to $gw(kg)$ in year 31 is =	.416E-05
Mass loading to $gw(kg)$ in year 32 is =	.381E-05
Mass loading to $gw(kg)$ in year 33 is =	.348E-05
Mass loading to gw (kg) in year 34 is =	.319E-05
Mass loading to gw (kg) in year 35 is =	.292E-05
Mass loading to $gw(kg)$ in year 36 is =	.268E-05
Mass loading to $gw(kg)$ in year 37 is =	.245E-05
Mass loading to $gw(kg)$ in year 38 is =	.224E-05
Mass loading to $gw(kg)$ in year 39 is =	.206E-05
Mass loading to $gw(kg)$ in year 40 is =	.188E-05
Mass loading to $gw(kg)$ in year 41 is =	.172E-05
Mass loading to $gw(kg)$ in year 42 is =	.158E-05
Mass loading to $gw(kg)$ in year 43 is =	.145E-05
Mass loading to $gw(kg)$ in year 44 is =	.132E-05
Mass loading to $gw(kg)$ in year 45 is =	.121E-05
Mass loading to $gw(kg)$ in year 46 is =	.111E-05
Mass loading to $gw(kg)$ in year 47 is =	.102E-05
Mass loading to $gw(kg)$ in year 48 is =	.932E-06
Mass loading to gw (kg) in year 49 is =	.853E-06
Mass loading to $gw(kg)$ in year 50 is =	.782E-06
Sesoil Completed	

Running AT123D

```
Year 1.0 avg. conc. [mg/l] = .000
Year 2.0 avg. conc. [mg/l] = .000
Year 3.0 avg. conc. [mg/l] = .000
Year 4.0 avg. conc. [mg/l] = .000
Year 5.0 avg. conc. [mg/l] = .000
Year 6.0 \text{ avg. conc. } [mg/l] = .185E-03
Year 7.0 avg. conc. [mg/l] = .391E-03
Year 8.0 avg. conc. [mg/l] = .478E-03
Year 9.0 avg. conc. [mg/l] = .600E-03
Year 10.0 avg. conc. [mg/l] = .635E-03
Year 11.0 avg. conc. [mg/l] = .707E-03
Year 12.0 avg. conc. [mg/l] = .711E-03
Year 13.0 avg. conc. [mg/l] = .751E-03
Year 14.0 avg. conc. [mg/l] = .736E-03
Year 15.0 avg. conc. [mg/l] = .754E-03
Year 16.0 avg. conc. [mg/l] = .728E-03
Year 17.0 avg. conc. [mg/l] = .731E-03
```

Year	18.0 avg. conc. [mg/l] = .699E-03		
Year	19.0 avg. conc. $[mg/l] = .692E-03$		
Year	20.0 avg. conc. [mg/l] = .657E-03		
Year	21.0 avg. conc. [mg/l] = .644E-03		
Year	22.0 avg. conc. $[mg/l] = .608E-03$		
Year	23.0 avg. conc. $[mg/l] = .591E-03$		
Year	24.0 avg. conc. $[mg/l] = .556E-03$		
Year	25.0 avg. conc. [mg/l] = .537E-03		
Year	26.0 avg. conc. [mg/l] = .503E-03		
Year	27.0 avg. conc. [mg/l] = .484E-03		
Year	28.0 avg. conc. [mg/l] = .452E-03		
Year	29.0 avg. conc. $[mg/l] = .432E-03$		
Year	30.0 avg. conc. [mg/l] = .403E-03		
Year	31.0 avg. conc. [mg/l] = .384E-03		
Year	32.0 avg. conc. [mg/l] = .358E-03		
Year	33.0 avg. conc. [mg/l] = .340E-03		
Year	34.0 avg. conc. [mg/l] = .316E-03		
Year	35.0 avg. conc. [mg/l] = .300E-03		
Year	36.0 avg. conc. [mg/l] = .278E-03		
Year	37.0 avg. conc. [mg/l] = .263E-03		
Year	38.0 avg. conc. [mg/l] = .244E-03		
Year	39.0 avg. conc. [mg/l] = .230E-03		
Year	40.0 avg. conc. [mg/l] = .213E-03		
Year	41.0 avg. conc. $[mg/l] = .201E-03$		
Year	42.0 avg. conc. $[mg/l] = .186E-03$		
Year	43.0 avg. conc. $[mg/l] = .175E-03$		
Year	44.0 avg. conc. $[mg/l] = .162E-03$		
Year	45.0 avg. conc. $[mg/l] = .152E-03$		
Year	46.0 avg. conc. $[mg/l] = .140E-03$		
Year	47.0 avg. conc. $[mg/l] = .132E-03$		
Year	48.0 avg. conc. $[mg/l] = .122E-03$		
Year	49.0 avg. conc. $[mg/l] = .114E-03$		
Year	50.0 avg. conc. [mg/l] = .105E-03		
AT12	3D RUN COMPLETED		
Simulation Finished			

AT123D MODEL RUN Receptor Well At 10 Meters

AT123D Output File i alysis for ... Chemicals in the analysis Tetrachloroethylene Jumber of years simulated: 50 ENERAL INPUT DATA ***** NO. OF POINTS IN X-DIRECTION 1 NO. OF POINTS IN Y-DIRECTION 1 NO. OF POINTS IN Z-DIRECTION 10 NO. OF ROOTS: NO. OF SERIES TERMS 1000 NO. OF BEGINNING TIME STEPS 1 NO. OF ENDING TIME STEP 50 NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION 1 INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE 1 SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE 50 INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT 1 CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD 2 AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS)1000E+02 AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ... BEGIN POINT OF X-SOURCE LOCATION (METERS)0000E+00 .0000E+00 END POINT OF X-SOURCE LOCATION (METERS)5490E+01 BEGIN POINT OF Y-SOURCE LOCATION (METERS)0000E+00 .7620E+01 END POINT OF Y-SOURCE LOCATION (METERS) BEGIN POINT OF Z-SOURCE LOCATION (METERS)0000E+00 END POINT OF Z-SOURCE LOCATION (METERS)0000E+00 .1500E+00 POROSITY HYDRAULIC CONDUCTIVITY (METER/YEAR)1010E+01 .7500E-01 HYDRAULIC GRADIENT LONGITUDINAL DISPERSIVITY (METER)1000E+00 LATERAL DISPERSIVITY (METER)1000E-01 VERTICAL DISPERSIVITY (METER)1000E-02 BULK DENSITY OF THE SOIL (KG/M**3)1700E+04 TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (YR) .. .1000E+01 DISCHARGE TIME (YR)5000E+02 NPUT DATA/RESULTS FOR CHEMICAL: Tetrachloroethylene INST. WASTE RELEASE (KG) VALID FOR INST CASE ONLY.. .1000E+01 DISTRIBUTION COEFFICIENT, KD (M**3/KG)4260E-03 MOLECULAR DIFFUSION COEFFICIENT (M**2/YR) .2069E+00 DECAY CONSTANT (1/YR).... .7008E-01 LIST OF TRANSIENT SOURCE RELEASE RATE

 1 OF TRANSTENT SOURCE RELEASE RATE

 .000E+00
 .000E+00
 .000E+00
 .422E-04

 .385E-04
 .352E-04
 .322E-04
 .294E-04
 .269E-04

 .246E-04
 .225E-04
 .205E-04
 .188E-04
 .172E-04

 .157E-04
 .144E-04
 .131E-04
 .120E-04
 .110E-04

 .101E-04
 .921E-05
 .843E-05
 .771E-05
 .706E-05

 .646E-05
 .591E-05
 .541E-05
 .496E-05
 .454E-05

 .416E-05
 .381E-05
 .348E-05
 .319E-05
 .292E-05

 .245E-05 .224E-05 .206E-05 .158E-05 .145E-05 .132E-05 .102E-05 .932E-06 .853E-06 .268E-05 .206E-05 .188E-05 .172E-05 .121E-05 .111E-05 RETARDATION FACTOR5828E+01 RETARDED LONGITUDINAL DISPERSION COEF. (M**2/YR) .. .2453E+00 RETARDED LATERAL DISPERSION COEFFICIENT (M**2/YR) . .2375E+00 RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/YR). .2367E+00 time [yr] = 1.00.00E+00conc [mg/l] =.11E+00conc [mg/l] =.22E+00conc [mg/l] =.33E+00conc [mg/l] =.44E+00conc [mg/l] = .000E+00 z [m] = .000E+00 z [m] = .000E+00 z [m] = z [m] = .000E+00

.000E+00

z [m] =

z [m] = .56E+0			
z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0) conc) conc) conc) conc 1 conc	[mg/l] = [mg/l] = [mg/l] = [mg/l] =	.000E+00 .000E+00 .000E+00 .000E+00 .000E+00
avg. conc. [mg/1]	= .000E+	00	
time [yr] = 5	.00		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$)conc)conc)conc)conc)conc)conc)conc)conc)conc)conc1conc	<pre>[mg/l] == [mg/l] ==</pre>	.000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00 .000E+00
avg. conc. [mg/1]	= .000E+	00	
time [yr] = 1	0.0		
z [m] = .00E+0 z [m] = .11E+0 z [m] = .22E+0 z [m] = .33E+0 z [m] = .44E+0 z [m] = .56E+0 z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0)conc)conc0conc0conc0conc0conc0conc0conc0conc1conc	<pre>[mg/l] = [mg/l] =</pre>	.115E-05 .114E-05 .113E-05 .112E-05 .109E-05 .107E-05 .103E-05 .994E-06 .951E-06 .905E-06
avg. conc. [mg/l]	= .106E-	05	
time [yr] = 1.	5.0		
z [m] = .00E+0 z [m] = .11E+0 z [m] = .22E+0 z [m] = .33E+0 z [m] = .44E+0 z [m] = .56E+0)conc0conc0conc0conc0conc0conc	[mg/l] = [mg/l] = [mg/l] = [mg/l] = [mg/l] =	.156E-04 .156E-04 .155E-04 .154E-04
z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0	0 conc 0 conc 0 conc 1 conc	[mg/1] = [mg/1] = [mg/1] = [mg/1] =	.152E-04 .150E-04 .147E-04 .144E-04 .141E-04 .137E-04
z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0 avg. conc. [mg/1]	0 conc 0 conc 0 conc 1 conc = .149E-	[mg/1] = [mg/1] = [mg/1] = [mg/1] = [mg/1] = 04	.152E-04 .150E-04 .147E-04 .144E-04 .141E-04 .137E-04
<pre>z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0 avg. conc. [mg/1] time [yr] = 2</pre>	0 conc 0 conc 0 conc 1 conc = .149E- 0.0	<pre>[mg/1] = [mg/1] = [mg/1] = [mg/1] = [mg/1] = [mg/1] = 04</pre>	.152E-04 .150E-04 .147E-04 .144E-04 .141E-04 .137E-04
<pre>z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0 avg. conc. [mg/1] time [yr] = 2 z [m] = .00E+0 z [m] = .11E+0 z [m] = .22E+0 z [m] = .33E+0 z [m] = .44E+0 z [m] = .56E+0 z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0</pre>	$\begin{array}{ccc} 0 & conc\\ 0 & conc\\ 0 & conc\\ 1 & conc\\ \end{array}$ $= .149E-$ $\begin{array}{ccc} 0 & conc\\ 1 & conc\\ 1 & conc\\ \end{array}$	<pre>[mg/1] = [mg/1] =</pre>	.152E-04 .150E-04 .147E-04 .144E-04 .141E-04 .137E-04 .372E-04 .372E-04 .369E-04 .369E-04 .3662E-04 .357E-04 .357E-04 .352E-04 .346E-04 .339E-04
<pre>z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0 avg. conc. [mg/1] time [yr] = 2 z [m] = .00E+0 z [m] = .11E+0 z [m] = .22E+0 z [m] = .33E+0 z [m] = .33E+0 z [m] = .56E+0 z [m] = .67E+0 z [m] = .78E+0 z [m] = .78E+0 z [m] = .10E+0 avg. conc. [mg/1]</pre>	0 conc 0 conc 0 conc 1 conc = .149E- 0.0 conc 0 conc 1 conc = .361E-	<pre>[mg/1] = [mg/1] =</pre>	152E-04 150E-04 147E-04 144E-04 141E-04 137E-04 372E-04 372E-04 369E-04 366E-04 357E-04 352E-04 352E-04 339E-04
<pre>z [m] = .67E+0 z [m] = .78E+0 z [m] = .89E+0 z [m] = .10E+0 avg. conc. [mg/1] time [yr] = 2 z [m] = .00E+0 z [m] = .11E+0 z [m] = .22E+0 z [m] = .33E+0 z [m] = .44E+0 z [m] = .56E+0 z [m] = .78E+0 z [m] = .78E+0 z [m] = .10E+0 avg. conc. [mg/1] time [yr] = 2</pre>	0 conc 0 conc 0 conc 1 conc = .149E- 0.0 conc 0 conc 5.0 0	<pre>[mg/1] = [mg/1] =</pre>	.152E-04 .150E-04 .147E-04 .141E-04 .141E-04 .137E-04 .372E-04 .372E-04 .369E-04 .369E-04 .362E-04 .357E-04 .357E-04 .352E-04 .346E-04 .339E-04

.11E+00 .525E-04 z [m] = conc [mg/1] =conc [mg/1] =z [m] =.22E+00 .524E-04 z [m] = .33E+00 conc [mg/1] =.521E-04 conc [mg/1] =z [m] = .44E+00 .518E-04 .56E+00 conc [mg/1] =.514E-04 [m] = Z conc [mg/l] =.67E+00 z [m] = .508E-04 z [m] = .78E+00 conc [mg/1] =.502E-04 .89E+00 conc [mg/1] =z [m] =.495E-04 z [m] = .10E+01 conc [mg/1] =.488E-04 avg. conc. [mg/1] =.512E-04 time [yr] = 30.0 .00E+00 .582E-04 z [m] = conc [mq/1] =.11E+00 conc [mg/1] =.581E-04 z [m] =z [m] = .22E+00 conc [mg/1] =.580E-04 .33E+00 conc [mg/1] =z [m] = .578E-04 .44E+00 z [m] = conc [mg/l] =.574E-04 z [m] =.56E+00 conc [mg/1] =.570E-04 [m] = .67E+00 conc [mg/l] =.566E-04 Ζ conc [mg/1] =z [m] = .78E+00 .560E-04 conc [mg/l] =z [m] = .89E+00 .553E-04 conc [mg/1] =z [m] = .10E+01 .546E-04 .569E-04 avg. conc. [mg/1] =time [yr] = 35.0 z [m] = .00E+00 conc [mg/1] =.561E-04 .11E+00 .561E-04 conc [mg/1] =z [m] = z [m] =.22E+00 conc [mg/1] =.559E-04 z [m] = .33E+00 conc [mg/1] =.558E-04 .555E-04 .44E+00 conc [mg/1] =z [m] = .552E-04 .56E+00 conc [mg/1] =z [m] = z [m] = .67E+00 .548E-04 conc [mg/1] =conc [mg/1] =Z [m] =.78E+00 .543E-04 conc [mg/1] =z [m] = .89E+00 .537E-04 .10E+01 conc [mg/1] =.531E-04 z [m] = .550E-04 avg. conc. [mg/1] =time [yr] = 40.0.00E+00 z [m] = conc [mg/1] =.496E-04 .496E-04 z [m] = .11E+00 conc [mg/1] =.495E-04 z [m] = .22E+00 conc [mg/l] =z [m] = .33E+00 conc [mg/1] =.493E-04 .44E+00 conc [mg/1] =.491E-04 z [m] = z [m] = .56E+00 conc [mg/1] =.489E-04 .67E+00 conc [mg/1] =.486E-04 z [m] = .78E+00 conc [mg/1] =.482E-04 z [m] = .478E-04 z [m] = .89E+00 conc [mg/1] =.10E+01 conc [mg/1] =.473E-04 z [m] = .488E-04 avg. conc. [mg/1] =time [yr] = 45.0 .00E+00 conc [mg/1] =.414E-04 z [m] = .11E+00 conc [mg/1] =.413E-04 z [m] = .22E+00 .413E-04 z [m] = conc [mg/1] =[m] = .33E+00 conc [mg/1] =.412E-04 Z Z [m] =.44E+00 conc [mg/1] =.410E-04 conc [mg/1] =.408E-04 [m] = z .56E+00 z [m] = .67E+00 conc [mg/1] =.406E-04 z [m] = .78E+00 conc [mg/1] =.403E-04 .89E+00 .400E-04 z [m] = conc [mg/1] =z [m] = .10E+01 conc [mg/1] =.396E-04 avg. conc. [mg/1] =.407E-04

time [yr] = 50.0

z	[m]	=	.00E+00	conc	[mg/l]	_	.331E-04
z	[m]	Ξ	.11E+00	conc	[mg/1]	=	.330E-04
Z	[m]	=	.22E+00	conc	[mg/l]	=	.330E-04
Z	[m]	=	.33E+00	conc	[mg/l]	=	.329E-04
z	[m]	=	.44E+00	conc	[mg/l]	=	.328E-04
z	[m]	=	.56E+00	conc	[mg/l]	==	.327E-04
z	[m]	=	.67E+00	conc	[mg/1]	=	.325E-04
z	[m]	=	.78E+00	conc	[mg/1]	=	.323E-04
z	[m]	=	.89E+00	conc	[mg/l]	=	.320E-04
Z	[m]	=	.10E+01	conc	[mg/l]	=	.318E-04

avg. conc. [mg/1] = .326E-04

==Reading Input File NUMBER OF YEARS SIMULATED: 50 ==Initializing Data

Deterministic Run

SIMULATION FOR CHEMICAL Tetrachloroethylene Run number 1

calling sesoil	
HYDRO CYCLE MONTH- 1	
HYDRO CYCLE MONTH- 2	
HYDRO CYCLE MONTH- 3	
HYDRO CYCLE MONTH- 4	
HYDRO CYCLE MONTH- 5	
HYDRO CYCLE MONTH- 6	
HYDRO CYCLE MONTH- 7	
HYDRO CYCLE MONTH- 8	
HYDRO CYCLE MONTH- 9	
HYDRO CYCLE MONTH- 10	
HYDRO CYCLE MONTH- 11	
HYDRO CYCLE MONTH- 12	
Mass loading to $gw(kg)$ in year 1 is =	.000
Mass loading to $gw(kg)$ in year 2 is =	.000
Mass loading to $gw(kg)$ in year 3 is =	.000
Mass loading to $gw(kg)$ in year 4 is =	.000
Mass loading to $gw(kg)$ in year 5 is =	.422E-04
Mass loading to $gw(kg)$ in year 6 is =	.385E-04
Mass loading to $gw(kg)$ in year 7 is =	.352E-04
Mass loading to $gw(kg)$ in year 8 is =	.322E-04
Mass loading to $gw(kg)$ in year 9 is =	.294E-04
Mass loading to $gw(kg)$ in year 10 is =	.269E-04
Mass loading to $gw(kg)$ in year 11 is =	.246E-04
Mass loading to $gw(kg)$ in year 12 is =	.225E-04
Mass loading to $gw(kg)$ in year 13 is =	.205E-04
Mass loading to $gw(kg)$ in year 14 is =	.188E-04
Mass loading to $gw(kg)$ in year 15 is =	.172E-04
Mass loading to $gw(kg)$ in year 16 is =	.157E-04
Mass loading to $gw(kg)$ in year 17 is =	.144E-04
Mass loading to $gw(kg)$ in year 18 is =	.131E-04
Mass loading to $gw(kg)$ in year 19 is =	.120E-04
Mass loading to $gw(kg)$ in year 20 is =	.110E-04
Mass loading to $gw(kg)$ in year 21 is =	.101E-04
Mass loading to $gw(kg)$ in year 22 is =	.921E-05
Mass loading to $gw(kg)$ in year 23 is =	.843E-05
Mass loading to $gw(kg)$ in year 24 is =	.771E-05

Mass loading to $gw(kg)$ in year 25 is =	.706E-05
Mass loading to $gw(kg)$ in year 26 is =	.646E-05
Mass loading to $gw(kg)$ in year 27 is =	.591E-05
Mass loading to $gw(kg)$ in year 28 is =	.541E-05
Mass loading to $gw(kg)$ in year 29 is =	.496E-05
Mass loading to $gw(kg)$ in year 30 is =	.454E-05
Mass loading to $gw(kg)$ in year 31 is =	.416E-05
Mass loading to $gw(kg)$ in year 32 is =	.381E-05
Mass loading to $gw(kg)$ in year 33 is =	.348E-05
Mass loading to $gw(kg)$ in year 34 is =	.319E-05
Mass loading to $gw(kg)$ in year 35 is =	.292E-05
Mass loading to $gw(kg)$ in year 36 is =	.268E-05
Mass loading to $gw(kg)$ in year 37 is =	.245E-05
Mass loading to $gw(kg)$ in year 38 is =	.224E-05
Mass loading to $gw(kg)$ in year 39 is =	.206E-05
Mass loading to $gw(kg)$ in year 40 is =	.188E-05
Mass loading to $gw(kg)$ in year 41 is =	.172E-05
Mass loading to $gw(kg)$ in year 42 is =	.158E-05
Mass loading to $gw(kg)$ in year 43 is =	.145E-05
Mass loading to $gw(kg)$ in year 44 is =	.132E-05
Mass loading to $gw(kg)$ in year 45 is =	.121E-05
Mass loading to $gw(kg)$ in year 46 is =	.111E-05
Mass loading to $gw(kg)$ in year 47 is =	.102E-05
Mass loading to $gw(kg)$ in year 48 is =	.932E-06
Mass loading to $gw(kg)$ in year 49 is =	.853E-06
Mass loading to $gw(kg)$ in year 50 is =	.782E-06
Sesoil Completed	

Running AT123D

```
Year 1.0 avg. conc. [mg/l] = .000
Year 2.0 avg. conc. [mg/l] = .000
Year 3.0 avg. conc. [mg/l] = .000
Year 4.0 avg. conc. [mg/l] = .000
Year 5.0 avg. conc. [mg/l] = .000
Year 6.0 \text{ avg. conc. } [mg/l] = .000
Year 7.0 avg. conc. [mg/l] = .000
Year 8.0 avg. conc. [mg/l] = .452E-07
Year 9.0 avg. conc. [mg/l] = .307E-06
Year 10.0 avg. conc. [mg/l] = .106E-05
Year 11.0 avg. conc. [mg/l] = .249E-05
Year 12.0 avg. conc. [mg/l] = .467E-05
Year 13.0 avg. conc. [mg/l] = .755E-05
Year 14.0 avg. conc. [mg/l] = .110E-04
Year 15.0 avg. conc. [mg/l] = .149E-04
Year 16.0 avg. conc. [mg/l] = .191E-04
Year 17.0 avg. conc. [mg/l] = .235E-04
```

Year	18.0 avg. conc. [mg/l] = .278E-04			
Year	19.0 avg. conc. $[mg/l] = .320E-04$			
Year	20.0 avg. conc. [mg/l] = .361E-04			
Year	21.0 avg. conc. [mg/l] = .398E-04			
Year	22.0 avg. conc. $[mg/l] = .432E-04$			
Year	23.0 avg. conc. [mg/l] = .463E-04			
Year	24.0 avg. conc. [mg/l] = .490E-04			
Year	25.0 avg. conc. [mg/l] = .512E-04			
Year	26.0 avg. conc. [mg/l] = .531E-04			
Year	27.0 avg. conc. [mg/l] = .546E-04			
Year	28.0 avg. conc. [mg/l] = .557E-04			
Year	29.0 avg. conc. $[mg/l] = .565E-04$			
Year	30.0 avg. conc. [mg/l] = .569E-04			
Year	31.0 avg. conc. [mg/l] = .570E-04			
Year	32.0 avg. conc. [mg/l] = .569E-04			
Year	33.0 avg. conc. [mg/l] = .565E-04			
Year	34.0 avg. conc. [mg/l] = .559E-04			
Year	35.0 avg. conc. [mg/l] = .550E-04			
Year	36.0 avg. conc. [mg/l] = .540E-04			
Year	37.0 avg. conc. [mg/l] = .529E-04			
Year	38.0 avg. conc. [mg/l] = .516E-04			
Year	39.0 avg. conc. [mg/l] = .502E-04			
Year	40.0 avg. conc. [mg/l] = .488E-04			
Year	41.0 avg. conc. $[mg/l] = .472E-04$			
Year	42.0 avg. conc. [mg/l] = .457E-04			
Year	43.0 avg. conc. [mg/l] = .440E-04			
Year	44.0 avg. conc. $[mg/l] = .424E-04$			
Year	45.0 avg. conc. [mg/l] = .407E-04			
Year	46.0 avg. conc. [mg/l] = .391E-04			
Year	47.0 avg. conc. [mg/l] = .374E-04			
Year	48.0 avg. conc. [mg/l] = .358E-04			
Year	49.0 avg. conc. $[mg/l] = .342E-04$			
Year	50.0 avg. conc. [mg/l] = .326E-04			
AT12	23D RUN COMPLETED			
Simulation Finished				



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary Gloria L. McCutcheon, Regional Director Southeast Region Annex 4041 North Richards Street PO Box 12436 Milwaukee, Wisconsin 53212-0436 Telephone 414-229-0800 FAX 414-229-0810

October 11, 2000

Robert Miller Spic & Span, Inc. 4301 North Richard Street Milwaukee, WI 53212

Subject: Deed restriction at Dry Clean USA, 17680 West Bluemound Road, file reference FID #268252050 ERR-ERP, BRRTS #0268120075

Dear Mr. Miller:

I have reviewed your consultant's request for the department to drop its deed restriction requirement for closure of this site. I am not able to drop the requirement due to problems with your consultant's site-specific residual contaminant level (RCL) calculations:

- 1. The ES is not a valid endpoint value for calculating a site-specific RCL. Ch. NR720 Wis. Adm. Code specifies that the PAL should be used. It would only be OK to use the ES in the equation if the dilution attenuation factor is 10 or greater.
- 2. Using a weighted average for present soil contamination is OK only if the soil is homogeneous. In this case, the soil varies from fill to silt to clay.

If you have any questions about this letter call me at 414-229-0850.

Sincerely Khn Feeney

Wisconsin Department of Natural Resources

Cc: SER File







July 18, 2000

Mr. John Feeney Wisconsin Department of Natural Resources 4041 North Richards Street P.O. Box 12436 Milwaukee, WI 53212-0436

RE: Closure request for the Dryclean USA facility at 17680 W. Bluemound Road, Brookfield, WI WDNR FID #268252050 ERR-ERP, WDNR BRRTS #0268120075

Dear John:

In response to your letter dated July 13, 2000, McLaren/Hart has developed site specific residual contaminant levels (RCLs) for PCE contaminated soil based on the protection of groundwater and human health in the event that the soil is not capped in the future.

Summary of RCL Model

The algorithm for Generic RCL for Migration to Groundwater Pathway was used as the basis for calculation of a site specific RCL. WDNR default values and chemical specific data were used for the input parameters, with the exception of the Enforcement Standard (ES) used in place of the Preventive Action Limit (PAL). The ES is based on the Federal Maximum Contaminant Level for drinking water. Given that the water at 14 feet below land surface (bls) is contained in clay soils that could not realistically serve as a drinking water aquifer and that there is no record of wells in the vicinity of the site, the ES provides a sufficient factor of safety for the RCL model. The site specific RCL for PCE was calculated at 126 µg/kg. The RCL calculations are attached.

The RCL algorithm is based on the assumption that the contaminated soil is a homogeneous mass from the depth at which the contamination begins to the depth at which it comes in contact with the groundwater table. Therefore, in order to represent a uniform soil concentration on site to fit the site specific RCL algorithm, the average concentration of PCE was calculated over the area of contaminated soils (4,600 square feet) to the average depth at which groundwater was observed (14 feet bls). Based on this, the average uniform concentration of PCE in the soil for comparison to the site specific RCL is 121 μ g/kg. The site plan showing the area of contamination and the calculations are attached.

Additional notes in support of the RCL model used include the following:

- Based on the soil borings performed on site, clay soils extend to a depth of at least 20 feet bls. This would limit migration of the PCE.
- Although the contaminants observed naturally degrade, the RCL model assumes that chemical, physical and/or biological degradation of contaminants is not occurring. Given that the most recent soil samples were collected over two years ago, it is estimated that the concentrations of PCE in the soil are now significantly lower than the concentrations used for comparison to the RCL. (P. Brady,



M. Brady, and D. Borns, *Natural Attenuation: CERCLA, RBCA's, and the Future of Environmental Remediation,* (CRC Press LLC, Florida, 1998), pp. 65-77.)

Conclusion

Based on the site specific RCL for PCE of $126 \ \mu g/kg$ and the **average uniform PCE** concentration on site of $121 \ \mu g/kg$, the soils are protective of groundwater. In addition, further migration is limited by the low conductivity soils on site. Based on this, McLaren/Hart requests closure of the site without the deed restriction.

Sincerely,

Brian Schneider, P.E.

C: Bob Miller – Spic and Span, Inc. Mark Thimke – Foley & Lardner

Attachments

O:\STAFF\BSCHNEID\spic and span\brownstones\ WDNR July 17.wpd

Dryclean USA Facility at 17680 West Bluemound Road Generic RCLs for Migration to Groundwater Pathway

Chemical	Ko	。 DAF'	ES	RCL		
PCE	537.0) 37.7	5.0	126.2		
Parameter	Value	Units		Notes		MOS workow
ES	variable	ug/l	chemical spe	cific	2 *	Vac as a root
K _{oc} =	variable	L/kg	chemical spe	cific	3	Javes from Aco
f _{oc} =	0.001	g/g	WDNR defau	Ilt value 🧻	1	· 0)= 300
p _b =	1.5	g/cm ³	WDNR defau	ılt value	1	
n=	0.45	cm ³ /cm ³	WDNR defau	ılt value 🏹 👘	1	150 63 17
d=	152.4	cm	WDNR defau	ılt value	1	lan - det in i
R=	25.4	cm	WDNR defau	ılt value	1	
Q=	0.2	cm ³ /cm ³	WDNR defau	ılt value 🦯	1	

Average Concentration of PCE in the Soil

- lan use wiegted average? - d.reet contact Average Depth to Groundwater is 14 Feet and the Total Source Area is 4,600 Square Feet.

	Interval			
Soil Boring	0' to 4'	4' to 14' See note 5		
HA-3/SB-1 ^{See note 4}	1200	180		
HA-2/SB-2 ^{See note 4}	2100	140		
SB-3	65	51		
SB-4	47	140		
SB-5	230	220		
SB-6	56	35		
SB-7	0	NS ⁶		
SB-8	87	32		
SB-11	0	0		
SB-12	0	0		
SB-13	0	0		
SB-14	0	0		
SB-16	0	0		
SB-17	0	0		
SB-18	290	NS ⁶		
Average	272	61		
Number of Samples	15	13		

	212	01
nples	15	13

direct contact 8.5 ppm Celeviated

Weighted Ave. Concentration of PCE in the Soil from 0' to 14' = (272 x 4/14)+(61 x 10/14)=121 ug/kg

Notes:

1. Algorithm for Generic RCL for Migration to Groundwater Pathway from Soil Cleanup Levels for PAHs

Interim Guidance, Wisconsin Department of Natural Resources, April 1997

2. NR 140

3. Groundwater Chemicals Desk Reference, Second Edition, John H. Montgomery

Average of values from Pavlostathis and Mathavan, 1992

4. HA-2 and HA-3 are located in the same area as SB-2 and SB-1, respectively.

5. Soil samples were collected to a depth of eight feet below surface and it was conservatively assumed

that the concentrations remained constant to a depth of fourteen feet below surface, although the site data indicated that PCE concentrations decreased with depth.

6. A soil sample was not collected from this interval.





State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary Gloria L. McCutcheon, Regional Director Southeast Region Annex 4041 North Richards Street PO Box 12436 Milwaukee, Wisconsin 53212-0436 Telephone 414-229-0800 FAX 414-229-0810

July 13, 2000

Robert Miller Spic & Span, Inc. 4301 North Richard Street Milwaukee, WI 53212

Subject: Case closure, Dry Clean USA, 17680 West Bluemound Road, file reference FID #268252050 ERR-ERP, BRRTS #0268120075

Dear Mr. Miller:

Based on the investigative documentation provided to the department, it appears that the above-named site is in compliance with the requirements of chs. NR 700 to 724, Wis. Adm. Code. Therefore, the department considers the case closed, having determined that no further action is necessary at the site at this time. However, the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare, or the environment.

This closure is contingent on your placing a restriction on the property deed that states that the soil contamination at the site must remain capped. Please send me a copy of the deed, and a draft deed restriction I will forward it to our attorney for approval. Once it is approved and has been filed, please provide a notarized copy to me, and I will have the case listed as closed on our computer database.

Please have the monitoring wells at the site properly abandoned in accordance with ch. NR141. Have your consultant send the completed well abandonment forms to me.

Sincerely.

Wisconsin Department of Natural Resources

Cc: McLaren/Hart SER File







July 3, 2000

Mr. John Feeney Wisconsin Department of Natural Resources P.O. Box 12436 Milwaukee, WI 53212

Re: FID #268252050 ERR/ERP Dryclean USA 1760 West Bluemound Road, Milwaukee Site Closure Request

Dear Mr. Feeney:

We have preformed the additional work you had requested in the May 1, 2000 letter regarding the case closure request of the former Dryclean USA facility referenced above.

1. Monitoring well MW-1 was sampled on May 9, 2000 in accordance with NR141 sampling protocol. A duplicate sample, field blank and trip blank were also submitted for analysis of the following volatile organic compounds (VOCs - Method 8260): PCE 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), trans-1,2-dichloroethene, cis-1,2-dichloroethene, 1,1,2-trichloroethane, 1,1-dichlorethane, 1,2-dichloroethane, and vinyl chloride. Groundwater elevations were also measured from all wells on site in order to confirm groundwater flow direction.

No VOCs were detected above the laboratory detection limits in any of the groundwater samples or blanks analyzed. Laboratory reports and chain of custody documents are attached for your review.

As previously determined, groundwater flow direction is to the southeast. Groundwater elevations and flow direction are presented on the attached figure.

2. Top and bottom depths of the roof drains adjacent to MHW-1 could not be determined because the drainage ways were sealed (inaccessable). The drain enters the ground in the vicinity of SB-14 and continues past SB-15. Based on previous experience, the drain is estimated to run four to five feet below ground surface and at this depth it would not be a conduit for groundwater flow. VOCs were not detected in soil borings SB-14 and SB-15.



Mr. John Feeney Wisconsin Department of Natural Resources Page 2

July 3, 2000

Based on the findings of this additional investigation and the Site Investigation Report dated March 2, 2000, McLaren/Hart recommends closure of the site. Feel free to contact either Brian Schneider or George Bayer if you have any questions or require additional information.

Sincerely,

McLAREN/HART INC.

Brian Schneider, P.E. Supervising Engineer

George & Bayer

George J. Bayer Associate Geoscientist

O:\COMMON\Spic&Span\BrownstonesDNRclsletter.wpd

cc: Mark Thimke, Esq. - Foley & Lardner
 Mr. Robert Miller - Spic and Span, Inc.
 Mr. Dan Prezembel - The RREEF Funds
 Mr. Tom Kroeger - STS Consultants

Enclosures





May 24, 2000

Brian Schneider McLaren/Hart W239 N2890 Pewaukee Rd. Pewauakee, WI 53072

RE: Spic & Span

Dear Brian Schneider

Enclosed are the results of analyses for sample(s) received by the laboratory on May 10, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Andy Johnson Project Manager



McLaren/Hart	Project:	Spic & Span	Sampled: 5/9/00	
W239 N2890 Pewaukee Rd.	Project Number:	100805104001001	Received: 5/10/00	
Pewauakee, WI 53072	Project Manager:	Brian Schneider	Reported: 5/24/00 11:03	

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	B005159-01	Water	5/9/00
MW-1d	B005159-02	Water	5/9/00
FB-1	B005159-03	Water	5/9/00
Trip Blank	B005159-04	Water	5/9/00

Great Laker Analytical Andy Johnson, Project Manager



McLaren/Hart	Project:	Spic & Span	Sampled:	5/9/00	
W239 N2890 Pewaukee Rd.	Project Number:	100805104001001	Received:	5/10/00	
Pewauakee, WI 53072	Project Manager:	Brian Schneider	Reported:	5/24/00 11:03	

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>MW-1</u>			B0051	<u>59-01</u>			Water	
1,1-Dichloroethane	0050499	5/19/00	5/20/00		5.00	ND	ug/l	
1,2-Dichloroethane	**		11		0.500	ND	**	
1,1-Dichloroethene	f#	n	**		0.500	ND	н	
cis-1,2-Dichloroethene	11		**		5.00	ND	54	
trans-1,2-Dichloroethene	н	н	F1		5.00	ND		
Tetrachloroethene	**	**	11		0.500	ND	"	
1,1,1-Trichloroethane	**		H .		5.00	ND	**	
1,1,2-Trichloroethane	**	17	**		0.153	ND	н.	
Trichloroethene	11	**	÷1		0.500	ND	"	
Vinyl chloride	17	н	n		0.214	ND	"	
Surrogate: Dibromofluoromethane	11	11	"	80.0-120		95.2	%	
Surrogate: 1,2-Dichloroethane-d4	"	11	"	80.0-120		59.6	"	04
Surrogate: Toluene-d8	"	"	"	80.0-120		100	<i>"</i> "	
Surrogate: 4-Bromofluorobenzene	"	"	"	80.0-120		67.8	"	04

Great Lakes Analytical

Andy Johnson, Project Manager

*Refer to end of report for text of notes and definitions.



McLaren/Hart	Project:	Spic & Span	Sampled:	5/9/00
W239 N2890 Pewaukee Rd.	Project Number:	100805104001001	Received:	5/10/00
Pewauakee, WI 53072	Project Manager:	Brian Schneider	Reported:	5/24/00 11:03

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>MW-1d</u>			B0051	<u>59-02</u>			Water	
1,1-Dichloroethane	0050499	5/19/00	5/20/00		5.00	ND	ug/l	
1,2-Dichloroethane	**	**	**		0.500	ND	**	
1,1-Dichloroethene	**	"	**		0.500	ND	**	
cis-1,2-Dichloroethene	**		**		5.00	ND		
trans-1,2-Dichloroethene	**	**	**		5.00	ND	54	
Tetrachloroethene	**	**	**		0.500	ND	**	
1,1,1-Trichloroethane	**	н	**		5.00	ND	**	
1,1,2-Trichloroethane	"	**	*		0.153	ND	H .	
Trichloroethene	**	"	"		0.500	ND	"	
Vinyl chloride	15	H	н		0.214	ND	**	
Surrogate: Dibromofluoromethane	"	11	"	80.0-120		94.6	%	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	80.0-120		57.8	"	04
Surrogate: Toluene-d8	"	"	"	80.0-120		100	́ п	
Surrogate: 4-Bromofluorobenzene	"	"	"	80.0-120		68.8	"	<i>O4</i>

Great Lakes Analytical

*Refer to end of report for text of notes and definitions.



McLaren/Hart	Project:	Spic & Span	Sampled:	5/9/00	
W239 N2890 Pewaukee Rd.	Project Number:	100805104001001	Received:	5/10/00	
Pewauakee, WI 53072	Project Manager:	Brian Schneider	Reported:	5/24/00 11:03	

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>FB-1</u>			<u>B0051</u>	<u>59-03</u>			<u>Water</u>	
1,1-Dichloroethane	0050499	5/19/00	5/20/00		5.00	ND	ug/l	
1,2-Dichloroethane	**	"			0.500	ND	**	
1,1-Dichloroethene	"	н			0.500	ND	н	
cis-1,2-Dichloroethene	"	**			5.00	ND		
trans-1,2-Dichloroethene	11	**	**		5.00	ND		
Tetrachloroethene	**	**	"		0.500	ND	**	
1,1,1-Trichloroethane		18	н		5.00	ND	**	
1,1,2-Trichloroethane	"	0	"		0.153	ND	**	
Trichloroethene	"	11	"		0.500	ND	"	
Vinyl chloride		"	н		0.214	ND	**	
Surrogate: Dibromofluoromethane	"	"	"	80.0-120		90.4	%	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	80.0-120		56.2	, <i>н</i>	04
Surrogate: Toluene-d8	"	"	"	80.0-120		99.8	11	
Surrogate: 4-Bromofluorobenzene	"	"	"	80.0-120		65.6	"	04

Great Lakes Analytical

Andy Johnson, Project Manager

*Refer to end of report for text of notes and definitions.

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001; Wisconsin DNR-999917160



McLaren/Hart	Project:	Spic & Span	Sampled:	5/9/00
W239 N2890 Pewaukee Rd.	Project Number:	100805104001001	Received:	5/10/00
Pewauakee, WI 53072	Project Manager:	Brian Schneider	Reported:	5/24/00 11:03

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>Trip Blank</u>			B0051:	<u>59-04</u>			<u>Water</u>	
1,1-Dichloroethane	0050499	5/19/00	5/19/00		5.00	ND	ug/l	
1,2-Dichloroethane		34	**		0.500	ND	**	
1,1-Dichloroethene	11	**	**		0.500	ND	**	
cis-1,2-Dichloroethene	**	н			5.00	ND	н	
trans-1,2-Dichloroethene	"	11	**		5.00	ND	**	
Tetrachloroethene	**	"	**		0.500	ND	"	
1,1,1-Trichloroethane	"	rs	**		5.00	ND		
1,1,2-Trichloroethane					0.153	ND	ท่	
Trichloroethene		"			0.500	ND	"	
Vinyl chloride	**	"	**		0.214	ND	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-120		92.8	%	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	80.0-120		60.0	; n	04
Surrogate: Toluene-d8	#	n	"	80.0-120		101	"	
Surrogate: 4-Bromofluorobenzene	"	"	"	80.0-120		70.6	"	04

Great Lakes Analytical

*Refer to end of report for text of notes and definitions.



1380 Busch Parkway Buffalo Grove, Illinois 60089

McLaren/H	Hart	Project:	Spic & Span	Sampled:	5/9/00	
W239 N28	890 Pewaukee Rd.	Project Number:	100805104001001	Received:	5/10/00	
Pewauakee	e, WI 53072	Project Manager:	Brian Schneider	Reported:	5/24/00 11:03	
		No	tes and Definitions			
#	Note					
O4	One or more surrogate rec	overies were below the labora	atory's established acceptance crit	eria.		
DET	Analyte DETECTED					
ND	Analyte NOT DETECTED) at or above the reporting lin	nit			
NR	Not Reported					
dry	Sample results reported on	a dry weight basis			•	
Recov.	Recovery					
RPD	Relative Percent Differenc	e				

Great Lakes Analytical

Andy Johnson, Project Manager



JG958198

CHAIN OF CUSTODY REPORT

1380 Busch Parkway Buffalo Grove, IL 60089-4505 (847) 808-7766 FAX (847) 808-7772 20725 Watertown Road Brookfield, WI 53501 (414) 798-1030 FAX (414) 798-1066

Client: McLaren Hart		Bill To:	Sam	e								TAT:	5 DAY) 4 D,	4Y 3	B DAY	2	DAY 1	DAY < 2	24 HRS.
Address: W239 N 289D Pewanker Rd D			Address:								DATE RESULTS NEEDED: 5/17/00									
Pewanker WI 53072			40n								TEMPERATURE UPON RECEIPT:									
Report to: Schnelden Fax #: (262)523-2040 Fax #: ()523-2040			State & Phone #: () Program: WI Fax #: ()							AIR BIL NO.										
Project: Spic & Span Brown stone Sampler: George T. Baver	d		Mic.	2	anness.	AMERS	Cela (s, cc	AMPI DNTR		/	
PO/Quote #:/00805/04 001001 FIELD ID, LOCATION /	Collection Collection	Samor Samor Maint	PRESERVA	No.). () () ()							10000000000000000000000000000000000000	MARCEN CO			ABORATO	ORY BER
1 MW-1 s	19/00	voter	HCL	3		χ												Ba	05K	ĵ-/
² MW~/d		(3		1														Z
3 FB-1 (Field Blank)				3				_												3
1 TRIP Blank	7	\checkmark	Ţ	1		\checkmark													· · · · · · · · · · · · · · · · · · ·	4
5																				
6																				
7				$\left \right $																
8								_												
9													_							
10																				
						2 101														
Locuen bayer 3:30,4 AA	The Metert	c	5-10-00 ^{12A1} 5460 116	т. Ис	I-N	JUISHI Neles	ED M		1	5-10-00	•	s () 	RECEIV	νED						
RELINQUISHED Total REC	CEIVED		DAT	'E	RELINC	QUISH	Бр				1	- i L	RECEIV	/ED					999999 (c. 02	
COMMENTS:	······································		HN	(<u>i.</u>]						· `.	
															PA	GE	1	0	F (



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary Gloria L. McCutcheon, Regional Director Southeast Region Annex 4041 N. Richards Street, Box 12436 Milwaukee, Wisconsin 53212-0436 TELEPHONE 414-229-0800 FAX 414-229-0810

May 1, 2000

Robert Miller Spic & Span, Inc. 4301 North Richards Street Milwaukee, WI 53212

1

SUBJECT: Case closure request, Dry Clean USA, 17680 West Bluemound Road, file reference FID #268252050 ERR-ERP

Dear Mr. Miller:

I have reviewed your consultant's submittal for additional work done at the site. I have the following questions/requirements before I can consider closing the case:

- 1. Resample monitoring well MHW-1 to confirm that concentrations are not increasing. Measure groundwater elevations in all three wells to confirm groundwater flow direction.
- 2. Determine the top and bottom depths of the sewer utility near well MHW-1 in case it may be a conduit for groundwater flow.

If you have any questions about this letter, call me at 414-229-0850.

Sincerely,

20 John Feeney Hydrogeologist

cc: McLaren/Hart SER File





March 2, 2000

Mr. John Feeney Wisconsin Department of Natural Resources P.O. Box 12436 Milwaukee, WI 53212

Re: FID #268252050 ERR/ERP Dryclean USA 1760 West Bluemound Road, Milwaukee Site Investigation Report

ERP 268252050 02-68-121075

Dear Mr. Feeney:

Enclosed are two copies of the Site Investigation Report for the Dryclean USA property referenced above, and a check for \$750 for the report review fee. The report was prepared in accordance with applicable sections of Wis. Adm. Code chs. NR 716.15. Based on the results of the investigation, McLaren/Hart recommends closure of the site. Feel free to contact either Brian Schneider or George Bayer if you have any questions or require additional information.

Sincerely,

McLAREN/HART ENVIRONMENTAL ENGINEERING CORPORATION

D-ILL

Brian Schneider, P.E. Supervising Engineer

Scorge & Bayer



George J. Bayer Associate Geoscientist

O:\COMMON\Spic&Span\brownfieldsdryusa.rpt.wpd

cc: Mark Thimke, Esq. - Foley & Lardner Mr. Robert Miller - Spic and Span, Inc. Mr. Dan Prezembel - The RREEF Funds



SITE INVESTIGATION REPORT

1.13

DRYCLEAN USA BROWNSTONES CENTER 17680 WEST BLUEMOUND ROAD BROOKFIELD, WISCONSIN FID #: 268252050 ERR/ERP

Prepared for:

Mr. Robert Miller Spic and Span, Inc. 4301 North Richards Street Milwaukee, WI 53212

Prepared by:

McLaren/Hart Environmental Engineering Corporation W239 N2890 Pewaukee Road Pewaukee, Wisconsin 53072

March 2, 2000

CERTIFICATION - PROFESSIONAL ENGINEER i
CERTIFICATION - HYDROGEOLOGIST ii
1.0 INTRODUCTION
1.1 SITE LOCATION
1.2 BACKGROUND1
1.3 PROPERTY OWNERSHIP
1.4 CONSULTANTS AND CONTRACTORS
2.0 SITE PHYSIOGRAPHY, GEOLOGY AND HYDROGEOLOGY
2.1 TOPOGRAPHY AND SURFACE WATER DRAINAGE
2.2 SOILS AND GEOLOGY
3.0 SITE INVESTIGATION ACTIVITIES
3.1 PROJECT SCOPING DATA
3.2 SITE PHYSIOGRAPHY/SAMPLING STRATEGY
3.3 FIELD INVESTIGATION METHODS
3.3.1 Soil Sample Collection and Handling
3.3.2 Groundwater Sample Collection and Handling
3.3.3 Decontamination Procedures
3.3.4 Laboratory Analysis
3.4 QUALITY ASSURANCE/QUALITY CONTROL METHODS
3.5 FIELD DOCUMENTATION
3.6 SITE HEALTH AND SAFETY6
3.7 INVESTIGATION SCOPE OF WORK
3.8 VARIATIONS FROM WORK PLAN7
3.9 RESULTS
3.9.1 Soil Sampling
3.9.2 Groundwater
4.0 RISK ASSESSMENT
5.0 SUMMARY AND RECOMMENDATIONS

TABLE OF CONTENTS

100

ŷ

TABLE OF CONTENTS (CONTINUED)

ATTACHMENTS

Attachment A	Figure 1	Site Location						
	Figure 2	Site Plan						
	Figure 3	Soil Analytical Results						
	Figure 4	Groundwater Flow Diagram						
Attachment B	Table 1 Table 2 Table 3	Soil Samples Laboratory Analytical Results Groundwater Laboratory Analytical Results WDNR Direct Contact Risk Model						
Attachment C	Field Metho	odologies						
Attachment D	Laboratory	Laboratory Analytical Reports and Chain-of-Custody Documents						
Attachment E	Soil Boring	Logs						

SITE INVESTIGATION REPORT

DRYCLEAN USA BROWNSTONES CENTER 17680 WEST BLUEMOUND ROAD BROOKFIELD, WISCONSIN FID #: 268252050

March 2, 2000

CERTIFICATION - PROFESSIONAL ENGINEER

I, Brian W. Schneider, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

REPORT:		9 pages
ATTACHME	NTS:	
А	Figures	3 pages
В	Tables	1 pages
С	Field Methodologies	3 pages
D	Laboratory Analytical Reports/Chain-of-Custody Documents	37 pages
E	Soil Boring Logs/Abandonment Forms/Well Construction Logs	16 pages

Signatur ille. BRUMW. SCHNEIDER PROFE Vo. 26922 P. BY Starban WI HILLING STONAL ENGIN

Date
SITE INVESTIGATION REPORT

DRYCLEAN USA BROWNSTONES CENTER 17680 WEST BLUEMOUND ROAD BROOKFIELD, WISCONSIN FID #: 268252050

March 2, 2000

CERTIFICATION - HYDROGEOLOGIST

I, George J. Bayer, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

REPORT:

ATTACHM	ENTS:	
А	Figures	

A	Figures	3 pages
В	Tables	1 pages
С	Field Methodologies	3 pages
D	Laboratory Analytical Reports/Chain-of-Custody Documents	37 pages
Е	Soil Boring Logs/Abandonment Forms/Well Construction Logs	16 pages

Signature and Title

3/2/00

9 pages

Date

1.0 INTRODUCTION

1.1 SITE LOCATION

The Property is located in the NW 1/4 of the SW1/4 of Section 28, Township 7 North, Range 20 East. The address is 17680-C West Bluemound Road in Brookfield Wisconsin. The site location is shown in Figure 1, Attachment A.

1.2 BACKGROUND

Dryclean USA is a subsidiary of Spic and Span, Inc. and the Dryclean USA facility is leased from BB & K Brownstones, Inc., A Wisconsin Corporation, the property owner. The Brownstone Shopping Center was constructed in 1988 and 1989. Dryclean USA has occupied the center since 1989. The dry cleaning machine was placed in a containment structure in 1995. The use of dry cleaning equipment and solvents was discontinued in November 1999.

On December 12, 1996, STS Consultants (STS) performed two hand auger borings (HA-2 to HA-3) adjacent to the dry cleaning machine. Soil samples were collected from the fill soils one to two feet below ground surface (bgs). The samples were analyzed for chlorinated volatile organic compounds (CVOCs) using EPA Method 8240. Samples contained concentrations of 1,200 and 2,100 micrograms per kilogram (μ g/kg) of tetrachloroethylene (PCE). Remaining CVOCs were not detected.

On the same date, STS also installed an exterior hand auger boring (HA-1) approximately 50 feet northwest of the dry cleaning machine, and an exterior monitoring well approximately 75 feet north of the dry cleaning machine. Samples were collected from 1 to 2 feet bgs in HA-1, and 5 to 7 and 9 to 11 feet bgs in MW-1. Clay soils were encountered from a depth of 5 feet bgs to the end of the boring at 17.5 feet bgs in the soil boring for MW-1. Field screening did not indicate the presence of VOCs and CVOCs were not detected in the laboratory analyses of samples collected from these borings. In addition, no VOCs were detected from a groundwater sample obtained from the monitoring well by STS.

1.3 PROPERTY OWNERSHIP

The Property is owned by:

£1198

BB&K Brownstones, Inc., A Wisconsin Corporation By: RREEF Management Company A Delaware Corporation its Agent 1211 West 22nd Street Suite 905 Oak Brook, IL 60523 Attention: Dan Prezembel (630) 574-9190

The responsible party for the site investigation is:

Spic & Span, Inc. 4301 North Richards Street Milwaukee, WI 53212 Attention: Mr. Robert Miller (414) 964-5050

1.4 CONSULTANTS AND CONTRACTORS

The site investigation activities reported herein were performed by:

McLaren/Hart Environmental Engineering Corporation W239 N2890 Pewaukee Road, Unit D Pewaukee, WI 53072 (414) 523-2040 - phone (414) 523-2059 - fax

As part of the investigation, the following service/commodity providers also conducted activities associated with the Property investigation:

<u>Soil Probe Services</u> On-Site Environmental Services, Inc. P.O. Box 280 Sun Prairie, WI 53590 (608) 837-8992

Laboratory Analytical Services En Chem, Inc. 1795 Industrial Drive Green Bay, WI 54302 (920) 469-2436

2.0 SITE PHYSIOGRAPHY, GEOLOGY AND HYDROGEOLOGY

2.1 TOPOGRAPHY AND SURFACE WATER DRAINAGE

- <u>Site Topography</u>. Based on the United States Geological Survey (USGS), Waukesha, Wisconsin, 7.5 minute topographic map (1994), the topography in the immediate vicinity of the site slopes downward to the north from the site.
- <u>Surface Water Drainage</u>. Storm water along the site is anticipated to generally drain northward along the curb side drainage associated with the parking lot of the retail mall in which Dryclean USA is located. The curb side drainage discharges to the storm sewer system. Storm water impacting the roof of the building is conveyed by roof drains to the storm sewer as well.

2.2 SOILS AND GEOLOGY/HYDROGEOLOGY

Site Geology/Hydrogeology. The surface soils in the area of the site have been classified by the U.S. Department of Agriculture, Soil Conservation Service (1971). The general soil association is the Hochheim-Theresa Association with site-specific soils consisting of Mequon Silt Loam, Ozaukee Silt Loam, and Ashkum Silty Clay Loam Series. The general soil association is described as well-drained soils with a subsoil of clay that formed in areas of thin loess and glacial till on moraines.

The glacial till deposits in the area of the subject property vary between 100 to 200 feet thick and consist of unsorted, unstratified, unconsolidated mixtures of clay, silt, sand, pebbles, cobbles and boulders. Drilling logs provided by the Wisconsin Geological and Natural History Survey for soil borings performed in the vicinity of the site indicate the clay to sandy clay soils extend to a depth of at least 106 feet bgs. The glacial till overlies the Niagara Dolomite bedrock which is up to 450 feet thick. The glacial deposits, as well as the bedrock, are considered to be groundwater aquifers. The bedrock aquifer supplies potable water to municipal and residential wells in Waukesha County. High usage of the aquifer has resulted in a depressed bedrock water table at an elevation of about 550 feet mean sea level (or about 300 feet bgs). Groundwater occurring in the glacial aquifer is hydraulically connected to the bedrock aquifer.

Soils consisting of silty clay with a trace of sand were observed beneath fill soils observed on-site. Fill soils were observed from one to four feet below ground surface and generally consisted of sand and/or crushed stone. Groundwater was observed in monitoring wells at depths ranging from approximately 8.5 to 17 feet bgs.

3.0 SITE INVESTIGATION ACTIVITIES

The site investigation scope of work was developed in response to data gaps from the previous investigation. Additional tasks were added to the scope of work as the need for additional data was identified. The additional tasks are specified in the following sections.

3.1 PROJECT SCOPING DATA

To the extent practical, the scope of the project was defined in consideration of the criteria listed in NR 716.07, as detailed below. The data were updated during the investigation, as appropriate:

- <u>Site Use</u>. The Dryclean USA facility is located in the Brownstones Shopping Center and has operated as a dry cleaning facility at this location since 1989.
- <u>Type and Amount of Impact</u>. Based on investigations performed prior to the McLaren/Hart investigation, soils in the immediate vicinity of the dry cleaning machine are impacted with PCE. Two samples collected from 1 to 2 feet bgs adjacent to the machine by STS Consultants contained concentrations of 1,200 and 2,100 ug/kg PCE.
- <u>Environmental Media Potentially Affected</u>. PCE impacts are thought to be predominately within the coarse fill materials underlying the Dryclean USA space.
- <u>Need for Access Permission</u>. The RREEF Funds owns the property on which the impact was found and has granted conditional access to conduct the investigation. Based on prior investigation findings, impact is believed to be limited to coarse materials beneath the floor slab of the Dryclean USA facility. Based on existing data, no off-site contamination is suspected. No off-site investigation is planned.
- <u>Potential Receptors</u>. No groundwater impacts have been identified at the site. Potential migration pathways include lateral migration along utility lines and along the coarse materials located beneath the buildings concrete floor slab. The City of Brookfield supplies potable water to the site and surrounding sites. Based on City of Brookfield records there are no wells in the vicinity of the site.
- <u>Significant Resources</u>. Based on existing data, the site has not affected and does not present a threat to any threatened or endangered species, sensitive habitats, wetlands, resource waters, or historical or archeological sites.
- Immediate or Interim Actions: None have been conducted or are proposed.

The additional information needed to determine an appropriate remedial response includes, the lateral and vertical boundaries of affected soil in the vicinity of the dry cleaning machine and other data needed to determine a site-specific cleanup approach.

3.2 SITE PHYSIOGRAPHY/SAMPLING STRATEGY

The sampling strategy was developed to identify the boundaries of soil impact, based on the known site conditions and characteristics. The sampling locations were selected based on data obtained from prior investigations and site characteristics.

3.3 FIELD INVESTIGATION METHODS

3.3.1 Soil Sample Collection and Handling

Soil sampling was performed using either portable power, hand augering, or soil probe equipment. Upon collection, the soil was classified with respect to USGS classification, color, moisture content, evidence of impact (discoloration and odor) and other observations. When practical, ASTM methods D-2487 and D-2488 were utilized. The information was recorded in a bound field notebook used to record daily activities.

As soon as possible following sample collection, the soil samples for the laboratory analysis were transferred to appropriate laboratory-provided containers. A fresh pair of latex (or similar) gloves will be used during the handling of each sample to minimize the potential for cross contamination. The samples were containerized in laboratory-provided 60-ml glass jars with Teflon[®] septa. Twenty-five to 35 grams of soil was placed in the jars and each sample was preserved in the field with laboratory-provided purge-and-trap grade methanol.

The sample jars were labeled with the sample location identification, depth of sample, date of sample collection and intended analysis. The sample jars were placed in resealable plastic bags and packed in an iced, insulated container. A chain-of-custody form was completed each day, and accompanied each container of samples from the site to the laboratory. Samples were transported from the facility to the laboratory via overnight courier.

3.3.2 Groundwater Sample Collection and Handling

Groundwater samples were collected from monitoring wells using either a dedicated PVC bailer or directly from the Tygon[®] tubing associated with the purging pump. The groundwater samples intended for VOC analysis were containerized in laboratory-provided 40-ml vials. The samples were preserved in the field using laboratory-prepared hydrochloric acid (HCl) to lower the pH of the sample to less than two. Each sample vial was filled until a positive meniscus was formed and securely capped with a Teflon[®]-septum lid. Each sample was inverted and firmly tapped to check for air bubbles. If bubbles were present in the sample, the sample was discarded and another collected.

As quickly as possible following sample collection, the sample vials will be labeled with the sample location identification, depth of sample, date of sample collection and intended analysis. The sample vials were then placed in resealable plastic bags and packed in an iced, insulated container. A chain-of-custody form was filled out upon completion of sampling each day, and

accompanied each container of samples to the laboratory. Samples were transported from the facility to the laboratory via laboratory courier.

3.3.3 Decontamination Procedures

Soil sampling equipment was decontaminated before each boring location using an Alconox or TSP solution and rinsed in clean water (distilled, deionized or municipal potable). Any sampling tools (i.e., spoons, knives, spatulas, etc.) were also be cleaned in a solution of Alconox or TSP solution and rinsed in clean water prior to collection of each sample. A clean pair of latex, or equivalent, gloves was used during each sample to minimize the potential for cross-contamination.

3.3.4 Laboratory Analysis

Laboratory analyses were performed by En Chem, Inc. using Wisconsin-modified U.S. EPA SW-846 Method 8260, target list compounds: PCE 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), cis 1,2-dichloroethene (cis 1,2-DCE), trans-1,2-dichloroethene, 1,1,2-trichloroethane, 1,1-dichlorethane, 1,2-dichloroethane, and vinyl chloride. The target list is defined to identify the PCE used at the facility, its potential breakdown products and related compounds.

3.4 QUALITY ASSURANCE/QUALITY CONTROL METHODS

The following quality assurance/quality control measures were implemented during the site investigation activities:

- Decontamination procedures and measures to minimize the potential for crosscontamination of samples were followed as specified in section 2.3.2.
- All site activities were recorded in a bound field notebook (see Field Documentation section below).
- Chain-of-custody procedures were followed as specified in Attachment D.

A methanol blank was included in each cooler shipped to the laboratory. The samples were shipped on ice; therefore, no temperature blanks were required.

3.5 FIELD DOCUMENTATION

All site activities were documented in a bound field notebook. Included in the daily documentation are:

• Procedures for sampling and other routine activities associated with the site investigation.

- Field observations.
- Chronological log of site activities.

3.6 SITE HEALTH AND SAFETY

The protection of site personnel and the general public is a primary concern. All reasonable measures were taken to protect the health and safety of the personnel and general public. A site Health and Safety Plan that meets or exceeds the standards found in 29 CFR 1910.120 was prepared and followed during site activities. All project personnel and subcontracted personnel were trained in hazardous materials handling and have appropriate on-site training and experience.

Detailed methodologies for each of these tasks is provided in Attachment D. Additional information is presented in the following sections.

3.7 INVESTIGATION SCOPE OF WORK

The site investigation activities, as presented in the April 22, 1997 Work Plan and the July 22, 1997 Work Plan Addendum, were implemented on January 10 and January 31, 1998. The scope of work included:

- Sample 18 soil borings to various depths (six to nine feet) below ground surface.
- Collect up to two soil samples from each boring for laboratory analysis of selected VOCs. The samples were collected from various depths.

The specific objectives of each sampling location are presented in the April 22, 1997 Work Plan and the July 22, 1997 Work Plan Addendum.

3.8 VARIATIONS FROM WORK PLAN

The following tasks were altered or added to the original work plan in response to field conditions and data needs:

- Borings SB-9 and SB-10 could not be completed due to adverse subsurface conditions (maximum soil probe depth-two feet bgs) and equipment limitations.
- Only one soil sample was submitted for laboratory analysis from boring SB-18 due to adverse subsurface conditions (maximum soil boring depth-four feet bgs).
- Installation and sampling of groundwater monitoring wells MHW-1 and MHW-2.

3.9 RESULTS

Boring and well locations are shown in Figures 2. Soil sample analytical results are summarized in Table 1 and groundwater analytical sample results are summarized in Table 2. Figure 3 presents soil analytical results. Figure 4 presents groundwater elevations and calculated flow direction. Laboratory reports, quality control data and chain of custody documents are provided in Attachment D. Soil boring logs are provided in Attachment E.

3.9.1 Soil Sampling

One to two soil samples were collected from each of the 16 soil borings installed at the site. The samples were submitted for laboratory analysis of select VOCs. The soil sampling analytical results are detailed in Table 1. Tetrachloroethene (PCE) was the only VOC detected. PCE was detected in eight of the sixteen borings (SB-1 through SB-6, SB-8, and SB-18) at concentrations as high as $290 \mu g/kg$.

PCE was not detected in any of the borings installed outside the building. PCE impacted soil was generally confined to within a 25 foot radius of the dry cleaning machine. The highest PCE concentrations were detected in the fill soils immediately beneath the interior concrete slab (SB-5 and SB-18). PCE concentrations decreased with depth in the natural clay soils. The PCE concentrations in samples collected from clay soils approximately five feet bgs in SB-1 and SB-2 (performed adjacent to the dry cleaning machine and just below the depth of HA-2 and HA-3) indicated PCE concentrations of 180 and 140 μ g/kg, respectively. These concentrations were approximately one-tenth less than the concentrations observed from the samples collected from the overlying fill material in HA-2 and HA-3.

3.9.2 Groundwater

One groundwater sample was collected from each of the three monitoring wells installed at the site. The groundwater sampling analytical results are detailed in Table 2. PCE was the only VOC detected. PCE was detected in groundwater monitoring well MW-1 at a concentration of 0.7 μ g/L. This concentration is below the NR 140.10 Enforcement Standard (ES) of 5 μ g/L and just above the Preventative Action Limit (PAL) of 0.5 μ g/L. PCE was not detected above the laboratory method detection limit in the remaining groundwater monitoring wells.

Based on the water elevations in MW-1, MHW-1, and MHW-2, the groundwater flow direction in the vicinity of the site is southeast.

4.0 RISK ASSESSMENT

Based on the results of the investigation the PCE is predominantly confined to a small volume of fill soils beneath the interior concrete slab. Soil boring logs from this investigation and previous investigations performed by STS indicate the underlying clay soils extend to a depth to at least 20

feet bgs, and drilling records from the vicinity of the site indicate clay soils extend to a depth of at least 120 feet bgs.

Groundwater was not observed in any of the borings within the impacted soil area. PCE was detected in the water sample from monitoring well MW-1 at a concentration of $0.7 \mu g/L$, which is below the ES and just above the PAL. PCE was not detected above the laboratory method detection limit in the remaining groundwater monitoring wells. The soils are confined beneath a concrete floor and above tight clay soils. Given the location of the site along Bluemound Road, it is reasonable to assume that an impermeable concrete surface will be a permanent feature of this site. The clay soils observed beneath the impacted soils are estimated to have a hydraulic conductivity of 1×10^{-7} cm/sec and extend to a depth of at least 120 feet bgs. There is no record of potable water wells on or in the vicinity of the site, and water in the area is supplied by the City of Brookfield. Based on this, the potential risk to human health through ingestion of groundwater would be minimal to non-existent.

The WDNR Direct Contact Risk Model was used to evaluate the excess cancer risk attributable to contact with PCE through ingestion of soil particles and inhalation of PCE vapors. The results of the model indicate that PCE concentrations in the soil as high as 8.5 mg/kg would not exceed the acceptable cancer risk of 1.0×10^{-6} . The highest concentration of PCE observed on site was 2.1 mg/kg. Currently, the soils are confined beneath the concrete floor of the building and the direct contact risk is not present. However, if in the future the building were to be demolished and the soils disturbed, the potential risk to human health through direct contact with the soil would be minimal to non-existent. The WDNR Direct Contact Risk Model is shown in Table 3.

5.0 SUMMARY AND RECOMMENDATIONS

A site investigation was performed at Dryclean U.S.A. site, 17680-C West Bluemound Road, Brookfield, Wisconsin. The investigation was conducted to assess the magnitude and extent of PCE detected in the soils during previous investigation activities. The investigation activities were conducted between April 30, 1997 and December 10, 1999. The scope of work included collection and analysis of 28 soil samples and three groundwater samples. from 16 soil boring locations, for chlorinated volatile organic compounds.

PCE affected soils are limited in magnitude and extent. Potential migration of the PCE is limited by the concrete surface and the native low conductivity clay soils. There is no record of potable water wells on or in the vicinity of the site, and water in the area is supplied by the City of Brookfield. Based on this, the potential risk to human health through ingestion of groundwater is minimal to non-existent. The potential for direct contact with the soils would arise in the event of an excavation, and the health risk to the excavation workers associated with the soil would be minimal to non-existent. Based on this information, closure of this case is recommended.



AN MORNE (1774)

, independent of the second second





איני מואטראר



Table 1 SOIL ANALYTICAL RESULTS Dryclean USA Facility 17680 West Bluemound Road Brookfield, Wisconsin Samples analyzed for Volatile Organic Compounds-special list (VOCs (Method 8260)). Concentrations in Micrograms per Kilogram PP b

						Dryclean	USA and	adjacient	Facilities							
	Comple Manderstein	00.1	CD 0	CD 2	CD 2	60.4	CD 4	CD 5	CD 6	<u>CD (</u>	60.4	CD 7	CD 0	cn o		
	Sample Identification	5B-1	58-2	28-3	28-3	58-4	58-4	28-2	58-5	28-0	28-0	5B-7	5B-8	20-9		
	Depin (II)	4-0	J-1 4/20/07	3-3	J-1 4/20/07	2-4	J-1 4/20/07	2-4	4-0	2-4	4-0	2-4	4-5	J-1 4/20/07		
ANAL VTCO.	Date Collected	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97		
ANALIIES:	1,1-Dichloroethane	ND		ND		ND	ND	ND		ND	ND	ND				
	1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND		ND		ND	ND		
	1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	Tetrachloroethene	180	140	65	51	47	140	230	220	56	35	ND	87	32		
	Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	Sample Identification	SB-11	SB-11	SB-12	SB-12	SB-13	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16	SB-16	SB-17	SB-17	SB-18
	Depth (ft)	3-4	5-6	3-4	5-7	3-4	5-7	2-4	6-8	2-4	6-8	2-4	5-7	2-4	6-8	3-4
	Date Collected	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/31/98	1/31/98	1/10/98	1/10/98	1/31/98
ANALYTES:	1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	290
	Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Only positive detection (i.e., > practical quantitation limit) shown.

ND: Not detected above practical quantitation limit.

Table 2 GROUNDWATER ANALYTICAL RESULTS Dryclean USA Facility 17680 West Bluemound Road Brookfield, Wisconsin

All samples analyzed for Volatile Organic Compounds-special list (VOCs Method 8021). Concentrations in Micrograms per Liter unless otherwise indicated

	Divician USA Facility - Brownstones								
	Sample Identification	MW-1	MHW-1	MHW-2	TRIP BLK	ES	PAL		
	Date Collected	11/22/99	11/22/99	11/22/99	11/22/99				
ANALYTES:	1,1-Dichloroethane	ND	ND	ND	ND	850	85		
	1,1-Dichloroethene	ND	ND	ND	ND	7	0.7		
	1,2-Dichloroethane	ND	ND	ND	ND	5	0.5		
	cis-1,2-Dichloroethene	ND	ND	ND	ND	70	7		
	trans-1,2-Dichloroethene	ND	ND	ND	ND	100	20		
	1,1,1-Trichloroethane	ND	ND	ND	ND	200	40		
	1,1,2-Trichloroethane	ND	ND	ND	ND	5	0.5		
	Trichloroethene	ND	ND	ND	ND	5	0.5		
	Tetrachloroethene (PCE)	0.7	ND	ND	ND	5	0.5		
	Vinyl chloride	ND	ND	ND	ND	0.2	0.02		

Notes:

Preventive Action Limit (PAL) and Enforcement Standard (ES) from Wisconsin Administrative Code NR 140 (Dec. 1998, No. 516).

No notation is made for reported concentrations less than the method detection limit, even if detection limit exceeds PAL or ES.

WDNR DIRECT CONTACT RISK MODEL SOIL CLEAN-UP GOALS

PROJECT NAME: Dryclean USA - Brownstones

SITE SPECIFIC PROPERTIES: 8.5 mg/kg C_{CHEM}= CONTAMINANT CONCENTRATION LS= 7 m WIDTH OF CONTAMINATED AREA 50 m² A= AREA OF CONTAMINATED SOIL ORGANIC CARBON CONTENT OF SOIL OC= 0.0038 fraction 2.6 g/cm³ P_s= SOIL PARTICLE DENSITY 0.45 unitless E= SOIL POROSITY

COMPOUND: PCE

CHEMICAL SPECIFIC PROPERTIES

ORAL CANCER SLOPE FACTOR (FROM RISK-BASED CONC. TABLE BACKGROUND INFORMATION) $SF_{O-CHEM} = 0.052 [(mg/kg-day)]^{-1}$ INHALATION CANCER SLOPE FACTOR (FROM RISK-BASED CONC. TABLE BACKGROUND INFORMATION) $SF_{i-CHEM} = 0.00203 [(mg/kg-day)]^{-1}$ MOLECULAR DIFFUSIVITY OR AIR DIFFUSION COEFFICIENT $D_{i-CHEM} = 0.0861 \text{ cm}^2/\text{sec}$ HENRY'S LAW CONSTANT $H_{CHEM} = 0.0149 \text{ atm} \text{-m}^3/\text{mol}$ ORGANIC CARBON PARTITION COEFFICIENT $K_{OC-CHEM} = 324 \text{ cm}^3/\text{gm}$

DNR DEFAULT EXPOSURE ASSUMPTIONS PER NR 720.19(5)(c)2.a.

INGESTION RATE OF SOIL AGE 1-6	IR _{SOILAGE 1-6} =	200	mg/day
INGESTION RATE OF SOIL AGE 7-31	IR _{SOILAGE 7-31} =	100	mg/day
DAILY INHALATION RATE	IR _{AIR} =	20	m ³ /day
AVERAGE BODY WEIGHT AGE 1-6	BW _{AGE 1-6} =	15	kg
AVERAGE BODY WEIGHT AGE 7-31	BWAGE 7-31=	70	kg
EXPOSURE DURATION DURING AGES 1-6	$ED_{AGE 1-6} =$	6	yr
EXPOSURE DURATION DURING AGES 7-31	ED _{AGE 7-31} =	24	yr
EXPOSURE DURATION FOR INHALATION OF PARTICULATES	EDINHALATION=	30	yr
EXPOSURE FREQUENCY	EF=	350	days/year
AVERAGING TIME	AT=	70	yr

CONTINUED ON FOLLOWING PAGE

EXCESS CANCER RISK DUE TO INGESTION OF SOIL

AGE ADJUSTED SOIL INGESTION FACTOR

IF_{SOIL/ADJ}= 114.29 mg-yr/kg-day

CANCER RISK FROM INGESTION OF CONTAMINATED SOIL

RISK_{ING-CHEM}= 6.92E-07 unitless

EXCESS CANCER RISK DUE TO INHALATION OF PARTICLES

RISK FROM INHALATION OF CONT. SOIL PARTICULATES	RISI	KINHP-CHEM=	= 6.6E-14 unitless
PARTICULATE EMISSION FACTOR	PEF=	3.07E+10) m³/kg
FUNCTION DEPENDENT ON Um/Ut	F(x)=	0.0497	unitless
EQUIVALENT THRESHOLD VALUE OF WIND SPEED AT 10 M	Ut=	12.8	m/sec
MEAN ANNUAL WIND SPEED	Um=	4.5	m/sec
FRACTION OF VEGETATIVE COVER	G=	0.05	unitless
RESPIRABLE FRACTION	RF=	0.036	g/m²-hr
DIFFUSION HEIGHT	DH=	2	m
WIND SPEED IN MIXING ZONE	V=	2.25	m/sec

EXCESS CANCER RISK DUE TO INHALATION OF VAPORS

UNIT CONVERSION - AREA OF CONTAMINATED SOIL	A _{CM} =	500000 cm*
EXPOSURE INTERVAL	Τ=	7.90E+08 sec
SOIL-WATER PARTITION COEFFICIENT	K _{d-CHEM} =	1.2312 cm³/g
SOIL-AIR PARTITION COEFFICIENT	K _{as-CHEM} =	0.496183 g/cm ³
EFFECTIVE DIFFUSIVITY	D _{ei-CHEM} =	0.066155 cm²/g
CHEMICAL ALPHA VALUE	Þ _{CHEM} =	0.008935 cm ² /sec
SOIL TO AIR VOLATILIZATION FACTOR	VF _{CHEM} =	10039.38 m ³ /kg
CANCER RISK DUE TO INHALATION OF VAPORS	RISK _{INHV-CHEM} =	2.02E-07 unitless

EXCESS CANCER RISK DUE TO CHEMICAL CONTAMINATED SOIL

RISK_{CHEM}= 8.94E-07 unitless

References

- 1.) Smith, R.L. October, 1995. "EPA Region III Risk-Based Concentration Table Background Information."
- 2.) U.S. EPA 1991. Risk Assessment Guidance for Superfund Volume 1: Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals).

O:/STAFF/RNIEDER/FORMS/NONIND.XLS

SOIL SAMPLE LOGGING, COLLECTION AND HANDLING

Following retrieval of the soil sample from the sampling device, a section of sample intended for laboratory analysis was contained. A portion of the sample was immediately transferred to laboratory-provided containers, field preserved (if appropriate), labeled, placed in a plastic bag, sealed and stored in an insulated container pending shipment to the laboratory.

The remaining sample was classified in accordance with ASTM method D-2487, with reference to method D-2488 (as appropriate). The descriptions may include information pertaining to soil type (Unified Soil Classification System code), grain size distribution, gradation, color (Munsell notation or other), odor, moisture content, consistency, grain shape, lithology and other content, structure, mottling and layering, as appropriate. Upon completion of classification, this portion of the sample was contained in a sealed plastic bag pending field screening, or was deposited in an appropriate container pending disposal.

The samples to be analyzed in the laboratory for volatile organic compounds (VOCs; SW-846 Method 8260) were transferred to laboratory-provided 60-ml glass jars with Teflon[®] septa. Twenty-five to 35 grams of soil was placed in the jars and preserved in the field with laboratory-provided purge-and-trap grade methanol. The jars were then securely sealed, labeled with the sample identification, date of collection and intended analysis. The selected sample containers were then placed in resealable plastic bags and stored on ice in an insulated container.

The samples were transported to a Wisconsin-certified laboratory via overnight courier or the laboratory courier or McLaren/Hart staff. All sampling locations and procedures were documented in a bound field notebook used to record daily activities at the site.

0:\COMMON\Spic&Span\brownfieldsdryusa.rpt.wpd

SAMPLE CUSTODY PROCEDURES

Sample custody procedures are designed to comply with U.S. EPA and National Enforcement Investigation Council (NEIC) requirements for sample control. Samples collected during a site investigation are the responsibility of identified persons from the time they were collected until they or their derived data are incorporated into the final report. Stringent chain-of-custody procedures were followed to maintain and document sample possession.

Chain-of-custody forms were competed to the fullest extent possible prior to sample shipment. They included the following information:

- Sample identification;
- Date collected;
- Source of sample (including type of sample and site identification);
- Sampler name.

The forms were filled out in a legible manner using waterproof ink and were signed by the sampler. Similar information was provided on the sample label, which was securely attached to the sample bottle. Samples were always accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them signed, dated and noted the time on the record. A separate custody record accompanied each sample container. A copy of the custody record was retained by the field sampler and filed upon return to the office.

coc.sop mw059503\sirae.rpt

SOIL PROBE SAMPLE COLLECTION METHODS

A soil probe (Geoprobe[®] or other) unit consists of a hydraulic ram with a hydraulic hammer, the sampling probe and driving rods. The sampling probe is a one- or two-inch diameter stainless steel tube into which a disposable polyethylene liner is inserted prior to each sampling event. The sampler is then driven into the ground using the hydraulic ram or, when the hydraulic ram cannot exert enough pressure to continue to push the sampler into the ground, the hammer.

Prior to driving the sampler into the ground and between each sampling event, the stainless steel tube was washed in a solution of water and Alconox[®]. The sampler was rinsed in clean water. A new, clean plastic sleeve was inserted for each sampling event. The plastic sleeves are disposable and not intended for reuse.

After the sampler penetrated the ground to the appropriate depth, the nose plug was removed (oneinch sampler only; the two-inch sampler does not use a nose plug) and the sampler was pushed/hammered an additional two feet into the ground (undisturbed soil collection procedures). Upon advancing the sampler two feet (one-inch sampler) or four feet (two-inch sampler), the entire sampler, with the plastic sleeve intact, was withdrawn. The plastic sleeve was then provided to the on-site geologist or scientist for soil classification and sample containerization.

O:\COMMON\Spic&Span\brownfieldsdryusa.rpt.wpd

GROUNDWATER SAMPLE COLLECTION AND HANDLING

The groundwater monitoring wells were purged and sampled using standard field procedures and as required in Wisconsin Administrative Code NR 141. Well MW-1 was purged using a submersible pump with Tygon[®] or PVC tubing. Wells MHW-1 AND MHW-2 were bailed dry with a disposable bailer prior to sampling. Groundwater samples were collected directly from the pump discharge tubing or bailer.

Samples to be analyzed in the laboratory for volatile organic compounds (VOCs; SW846 Method 8260) were collected in laboratory-provided 40-milliliter glass vials with Teflon[®] septa. The samples were filled until a positive meniscus was formed, preserved in the field with laboratory-provided hydrochloric acid in pre-measured ampules and securely capped. The vials were then inverted, firmly tapped and examined for air bubbles. If bubbles were found, the sample was discarded and a new sample was collected.

Following sample collection, the samples were labeled with the sample identification, date of collection and intended analysis. The samples were then placed in resealable plastic bags and stored on ice in an insulated container. The samples were transported to a WDNR-certified laboratory via overnight courier or by the McLaren/Hart field staff. All sampling locations and procedures were documented in a bound field notebook used to record daily activities at the site.

smplh20.sop mw029514.3\si-re.rpt



December 2, 1999

Brian Schneider McLarenHart W239 N2890 Pewaukee Rd Unit D Pewaukee, WI 53072

RE: Spic & Span - Brownstones

Dear Brian Schneider

Enclosed are the results of analyses for sample(s) received by the laboratory on November 23, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

M

Andy Johnson Project Manager



McLarenHart	Project:	Spic + Span- Brownstones	Sampled:	11/22/99
W239 N2890 Pewaukee Rd Unit D	Project Number:	N/A	Received:	11/23/99
Pewaukee, WI 53072	Project Manager:	Brian Schneider	Reported:	12/2/99 11:34

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	B911468-01	Water	11/22/99
MHW-2	B911468-02	Water	11/22/99
MHW-1	B911468-03	Water	11/22/99
FB-1	B911468-04	Water	11/22/99
Trip Blank	B911468-05	Water	11/22/99

Great Lakes Analytical



McLarenHart	Project:	Spic + Span- Brownstones	Sampled:	11/22/99
W239 N2890 Pewaukee Rd Unit D	Project Number:	N/A	Received:	11/23/99
Pewaukee, WI 53072	Project Manager:	Brian Schneider	Reported:	12/2/99 11:34

	Batch	Date	Date	Reporting			
Analyte	Number	Prepared	Analyzed	Limit	Result	Units	Notes*
<u>MW-1</u>			<u>B911468-01</u>			<u>Water</u>	
1,1-Dichloroethane	9110537	11/22/99	11/24/99	0.50	ND	ug/l	
1,2-Dichloroethane		"	17	0.50	ND	"	
I,1-Dichloroethene	н	н	11	0.50	ND	**	
cis-1,2-Dichloroethene	н	**		0.50	ND	"	
trans-1,2-Dichloroethene	18	18	u.	0.50	ND	"	
Tetrachloroethene	"	**	"	0.50	0.70	н	
1,1,1-Trichloroethane	"		11	0.50	ND	11	
1,1,2-Trichloroethane	**		11	0.16	ND	"	
Trichloroethene	"	"	"	0.50	ND	н	
Vinyl chloride	"	11	"	0.17	ND	"	

Great Lakes Analytical

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001; USACE; Wisconsin DNR-999917160



McLarenHart	Project:	Spic + Span- Brownstones	Sampled:	11/22/99
W239 N2890 Pewaukee Rd Unit D	Project Number:	N/A	Received:	11/23/99
Pewaukee, WI 53072	Project Manager:	Brian Schneider	Reported:	12/2/99 11:34

	Batch	Date	Date	Reporting	······		
Analyte	Number	Prepared	Analyzed	Limit	Result	Units	Notes*
<u>MHW-2</u>			<u>B911468-02</u>			<u>Water</u>	
1,1-Dichloroethane	9110537	11/22/99	11/24/99	0.50	ND	ug/l	
1,2-Dichloroethane	**	17	**	0.50	ND	17	
1,1-Dichloroethene	**	**	17	0.50	ND	**	
cis-1,2-Dichloroethene	13	**	"	0.50	ND	71	
trans-1,2-Dichloroethene	**	"	"	0.50	ND	11	
Tetrachloroethene	**	**	17	0.50	ND		
1,1,1-Trichloroethane	**	**	"	0.50	ND	я	
1,1,2-Trichloroethane	"	11	н	0.16	ND	17	
Trichloroethene	14	79	"	0.50	ND	27	
Vinyl chloride	**	**	"	0.17	ND	**	

Great Lakes Analytical



McLarenHart	Project:	Spic + Span- Brownstones	Sampled:	11/22/99
W239 N2890 Pewaukee Rd Unit D	Project Number:	N/A	Received:	11/23/99
Pewaukee, WI 53072	Project Manager:	Brian Schneider	Reported:	12/2/99 11:34

	Batch	Date	Date	Reporting			
Analyte	Number	Prepared	Analyzed	Limit	Result	Units	Notes*
u.,							
<u>MHW-1</u>			<u>B911468-03</u>			<u>Water</u>	
1,1-Dichloroethane	9110537	11/22/99	11/24/99	0.50	ND	ug/l	
1,2-Dichloroethane	н	11	**	0.50	ND		
1,1-Dichloroethene		н	"	0.50	ND	"	
cis-1,2-Dichloroethene	"	"	"	0.50	ND	18	
trans-1,2-Dichloroethene	11	н	11	0.50	ND	11	
Tetrachloroethene		н	**	0.50	ND	н	
1,1,1-Trichloroethane	**		"	0.50	ND	11	
1,1,2-Trichloroethane	rs			0.16	ND	**	
Trichloroethene	19	H	"	0.50	ND	**	
Vinyl chloride		"	11	0.17	ND	n	

Great Lakes Analytical

Andy Johnson, Project Manager

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001; USACE; Wisconsin DNR-999917160



McLarenHart	Project:	Spic + Span- Brownstones	Sampled:	11/22/99
W239 N2890 Pewaukee Rd Unit D	Project Number:	N/A	Received:	11/23/99
Pewaukee, WI 53072	Project Manager:	Brian Schneider	Reported:	12/2/99 11:34

	Batch	Date	Date	Reporting			
Analyte	Number	Prepared	Analyzed	Limit	Result	Units	Notes*
<u>FB-1</u>			<u>B911468-04</u>			<u>Water</u>	
1,1-Dichloroethane	9110537	11/22/99	11/24/99	0.50	ND	ug/l	
1,2-Dichloroethane	"	"	**	0.50	ND	**	
1,1-Dichloroethene	**	11	tł.	0.50	ND	ş1	
cis-1,2-Dichloroethene	*	**	"	0.50	ND	"	
trans-1.2-Dichloroethene	**	11		0.50	ND	*1	
Tetrachloroethene	**	"	н	0.50	ND	**	
1,1,1-Trichloroethane	**	**	"	0.50	ND	20	
1,1,2-Trichloroethane	11	11	17	0.16	ND	**	
Trichloroethene	**	**	17	0.50	ND	**	
Vinyl chloride	21	"	n	0.17	ND	**	

Great Lakes Analytical

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001; USACE; Wisconsin DNR-999917160



McLarenHart	Project:	Spic + Span- Brownstones	Sampled:	11/22/99
W239 N2890 Pewaukee Rd Unit D	Project Number:	N/A	Received:	11/23/99
Pewaukee, WI 53072	Project Manager:	Brian Schneider	Reported:	12/2/99 11:34

ſ	Batch	Date	Date	Reporting			
Analyte	Number	Prepared	Analyzed	Limit	Result	Units	Notes*
<u>Trip Blank</u>			<u>B911468-05</u>			Water	
1,1-Dichloroethane	9110537	11/22/99	11/24/99	0.50	ND	ug/l	
1,2-Dichloroethane	"	11	**	0.50	ND	11	
1,1-Dichloroethene	"	11	"	0.50	ND		
cis-1,2-Dichloroethene	11	"	"	0.50	ND	**	
trans-1,2-Dichloroethene		н	n	0.50	ND	"	
Tetrachloroethene	u.	"	"	0.50	ND	"	
1,1,1-Trichloroethane	H	"	н	0.50	ND	**	
1,1,2-Trichloroethane	"	11	"	0.16	ND	"	
Trichloroethene	"	11	**	0.50	ND		
Vinyl chloride	"		**	0.17	ND	"	

Great Lakes Analytical

Andy Johnson, Project Manager

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001; USACE; Wisconsin DNR-999917160



McLaren	Hart	Project:	General Project	Sampled:	11/22/99							
W239 N2	2890 Pewaukee Rd Unit D	Project Number:	Spic + Span- Brownstones	Received:	11/23/99							
Pewaukee	e, WI 53072	Project Manager:	Brian Schneider	Reported:	12/2/99 11:34							
		No	tes and Definitions									
#	¥ Note											
DET	Analyte DETECTED											
ND	Analyte NOT DETECTED at	or above the reporting lir	nit									
NR	Not Reported											
dry	Sample results reported on a c	lry weight basis										
Recov.	Recovery											
RPD	Sample results reported on a dry weight basis ov. Recovery Relative Percent Difference											

Great Lakes Analytical

.



05100500

CHAIN OF CUSTODY REPORT

1000 Dusct Doway Buffalo Grove, IL 60089-4505 (847) 808-7766 FAX (847) 808-7772 2 Waten Rot Brookfield, WI 53501 (414) 798-1030 FAX (414) 798-1066

Client: McLaren, Hart	Bill TO: Sime		TAT: 5 DAY	4 DAY 3 DAY 2 DAY 1 DAY < 24 HRS.
Address: W239 N 2890 Pewauker Kd	Address:		DATE RESULTS	NEEDED:
Pewanker, WI 53072			TEMPERATURE	UPON RECEIPT: ONICE
Report to: Jchneider Fax #: (414)523-	2040 State &	Phone # () Fax #: ()	V V W AIR BUL NO.	GLAPIU
Project: SPIC & Span - Browns tones				SAMPLE
Sampler: George Bayer		The second se	7 7 7 3 M	CONTROL
PODUCE #: 160805/04 001 001	Line and the second			
	(undo)			
11/22/29	HCL HCL	3 X		19911468-01
2 MHW-2		3 X		2
3 MHW-1		3 X		7
4 FB-1		3 X		Y Y
5 TRIP Blank				
7				
8				
9				
RELINDUSHED 11/23/99 RECEIVED	11/23/9	an Relinquished	1/23/98 CEIVED	11/23/29
RELINQUISHED	in cons y!	RELIVIQUISHED		
2 3M.0	. et il		<u>77</u> .4	·····
COMMENTS:	10			
				PAGE OF

State o	of Wisco	onsin	nl Raco		Route To	:		— 11	(Vares				SOI For	L BOR m 4400	ING L 122	OG INE	ORM	ATIC: 7-9
Depar	iment o	e Natur	JI K620	dices		waste jency Ri	esponse	u D U D	iaz. Inder	waste ground	i Tanks			1.01					7-9
					🗌 Waste	water		W []	Vater	Resou	rces					Pa	ve 1	of	1
Facilit	v/Proje	er Nam	e			,,			Lice	ense/Pe	rmit/M	onitorii	ıg Nur	nber	Boring	, Num	ber		<u> </u>
Drv	clean	USA	Facili	ty											SB-1				
Boring	Drilled	i By (F	irm nar	ne and name	of crew ch	iet)			Dat	e Drill	ing Star	ted	Dat	e Drillir	ig Com	pleted	Drillu	ig Met	hod
On-	Site E	nviro	nment	al/Denny	Totske					4/	30/97			4/3	30/97		Soilg	robe	
DNR	acidity	₩e‼ Ì	io. W	l Unique We	li No. (Commor	ı Well Na	ıme	Fina	al Stati	c Water	Level	Suri	face Ele	vation		Borehole	= Diam	eter
			<u> </u>						<u> </u>		Fee	t	Loc	al Grid	Locatio	n (If a	pplicabl	<u>2.0</u> (e)	Inches
Boring	Locati Plane	on			N	í, E	S/C	./N		Lat	0 ′ ″	,				N			Ε
0	1/4	of	1/4	4 of Section		Г 1	N,R		lt	.ong	0 ' "			Fe	et 🗌	S		Feet	w
Count	, ikesha							NR Cou	IULÀ	Code	Civil I Broo	'own/C. kfield	iry/ or	Village					
San	nple													 	Soil	Prope	erties	T	-
		S	cel		Soil/Rock	c Desc	ription							-					
	(in) red	uno	n Fe	A	nd Geolo	gic Or	igin Foi	r		~	9	ε	D	rd	II C				ents
ıber	gth over	C ₹	L H		Each N	Major I	Unit			Ü	indu s	ll ngra	Ы/С	netr	Distr	quid	istic init	500	/QZ
Nun	Len Rec	Blo	Del							S N	Log Cu	Di:	E	Sta Per	žů		ĒĒ		l <u>≚</u> °
			F	(concrete)					_		\times								ļ
			E,	FILL, cru	shed stone a	ind sand					\bigotimes								ļ
1	24		-								\bigotimes								
			-2								\bigotimes								
			E																
	70		<u>-</u> 3								\bigotimes								
2	20		F								\bigotimes								
			E4							CL									
			E	CLAY, si	lty, trace fu	ne to coa	irse grain	ed											
3	12		15 [Sand. 010	wii, dry.														
			– °																
				(}								
			ļ																
									1										
				L		···				<u> </u>						L	<u> </u>	<u> </u>	!
[hereb	y certit	iy that	the info	rmation on t	this form is	true and	correct t	to the be	est o	ř my ki	nowledg	e.							
Signati	ite								eum		McLa	iren/H ield. W	art isconsi	in					
											Tel: 41	4-790-1	974.	Fax: 4	14-790-	1989			
This fo	urm is a	uthoriz	ed by (Chapters 144	, 147 and 1	62, Wis	, Stats. (Comple	tion (of this	report i	s manda	tory.	Penaltie	s: For	reit not	less tha	n 510 r	nor

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penanties: Forter normal net 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.

State (Depar	of Wisco ment of	onsin f Natur	al Reso	ources	Route To: Solid W Emerge Wastew	laste ncy Response arer	Ц н С и С м	laz. W Inderg Vater B	'aste rounc Resou	i Tanks rces			SOI For	L BOR m 4400	ING L(-122	DG INF	ORM	ATION 7-9
							0	other				- Nur	aber	Boring	Pag	e l	of	1
Facilit	y/Projec	ct Nam t i S a	e Facili	rv				Licen	ise/P	ermit/M	onitoru	ig rau	1001	SB-2		-		
Boring	Drilleo	By (F	irm nar	ne and name	of crew chie	r)	·······	Date	Drill	ing Star	ted	Date	Drillir	ng Com	pleted	Drillin	g Mer	hod
On-	Site E	nviroi	iment	al/Denny	Fotske				4/	'30/97			4/3	30/97		Soilp	robe	
DNR	Facility	Well N	io. ₩	I Unique We	II.No. Co	ommon Well N	lame	Final	Stati	c Water Fee	Level	Surt	ace Ele	vation Feet	B	lorehole	: Dian 2.0	ieter Inches
Boring	Locatio	n								0 . "		Loc	al Grid	Locatio	n (If ap	plicable	e)	_
State	Plane	- 6	14	1 of Section	N, T	E S/C	C/N			0 / "			Fe		N S	j	Feet	L E C W
Count	1/4 (10	1/2	+ of Section			ONR Cou	inty C	ode	Civil T	own/Ci	ry/ or	Village					
Wai	ikesha									Broo	kfield		1	Soil	Proper		- <u></u>	
San	nple																	-
		sli	icel		Soil/Rock	Description							E E					s
Ļ.,	(in) Sred	Court	In I	A	nd Geologi	ic Origin Fo	or		s	ic	am	۵ŀ	ard ratio	lure		2	-	/ men
mbe	ngth cove	0 W (epth		Each M	ajor Unit			s C	raph og	/ell iagr	1D/1	tand	lois	ini	last	20(DOD 0
	le Le	Ē	ă								<u>× 0</u>	<u> </u>	N d	20				120
				(concrete)						$\overset{\sim}{\times}$								
	24		<u>F</u> 1	FILL, cru	shed stone an	d sand				\otimes								
•										\mathbb{X}								
			-2							\bigotimes								
										\bigotimes								}
2	8									\bigotimes								
			-4															
										\bigotimes								
3	24		-5						CL		-							
-			E,	sand, brov	ty, trace fine vn, dry.	to coarse grai	nea											
			-	<u></u>														
											Ì							
]			
														- Andrew State				
																		<u> </u>
[hereb	y certif	y that t	he info	rmation on t	his form is tr	ue and correct	to the b	est of	my k	nowledg	e.			_				
Signan	ure							Firm		McLa Brookt	ren/H ield, W	art	n Frank	1.1.700	0801			
								<u> </u>		Tel: 41	4-790-1	.974.	Fax: 4	14-190-	eit not	less tha	n \$10	пог
This for more t	orm is ai han SJ.(uthoriz 200 for	ed by (each v	Chapters 144 violation. Fi	, 147 and 163 ned not less t	2, Wis. Stats. han \$10 or mo	Complet fore than 2 fore than 3	tion of \$100 o	r this or imp 62-06	report is prisoned Wie 9	not les. Stats	s than	30 days	or boi	h for e	ach viol	ation.	

Each day of continued viola sepa =. P

- "B

Department	consin of Natu	ral Reso	ources	Route To:	iste		az. Was	e Ind Tank	c		SOIL BORING LOG INFORMATION Form 4400-122 7-91					
				U Emergen Wastewa	cy Kesponse ter		ater Re	ources	د				Pag	e 1	of	1
Facility/Proj	ect Nan	ne Facili					ther License	Permit/N	Aonitori	ng Nur	nber	Boring	, Numb	er	01	<u> </u>
Boring Drille	ed By (I	Firm nar	ne and name	of crew chiet))		Date Di	illing Sta	rted	Dat	e Drillir	ng Com	pleted	Drillir	ig Met	hod
On-Site	Enviro	nment	al/Denny 7	Totske			4/30/97				4/3	30/97		Soilprobe		
DNR Facilit	y Well I	No. W	I Unique Wel	I No. Cor	nmon Well N	lame	Final St	atic Wate Fe	et	Sur		Feet			2.0	eter Inches
Boring Loca State Plane	tion			N,	E S/	C/N	Lat	0 '	n	Loc			ni (ti aţ N	ρποασι	e)	E
1/4 Courts	of	1/-	4 of Section	T	N,R	ONR Cou	Long	e Civil	" Town/C	iry/ or	Fe Village		2		Feet (
Waukesh	a		1					Bro	okfield		1	Soil	Prope	rties		1
Sample	-															-
mber ngth (in) covered	ow Counts	pth In Feet		Soil/Rock I nd Geologic Each Ma	Description c Origin Fo jor Unit	ı or	3 J 3	raphic De	ell iagram	ID/FID	tandard	foisture	iquid imit	lastic	200	QD/ omments
Re Le]				=		<u> ≩∩</u> ⊲	<u> </u>	<u>24</u>	≥ 0				
1 24			(concrete) FILL. crus	hed stone and	sand											
2 20																
3 12			CLAY, sili sand, brow	ry, trace fine t n, dry.	o coarse grai	ined										
	-															
3								na chuir an tha ch								
I hereby cert	iry that	the info	rmation on d	is form is tru	e and correct	to the be	st of my	knowled	ge.							
Signature						F	Firm	McL Brook Tel: 4	aren/H field, W 14-790-	lart iscons 1974,	in Fax: 4	14-790-	1989			
This form is more than \$5	authori. ,000 fo	zed by (r each v	Chapters 144, violation. Fir	147 and 162, ted not less th	Wis. Stats. an \$10 or mo	Complet ore than S	ion of th 100 or i	is report mprisone	is mand: d not les	atory. s than	Penaltie 30 days	es: Fort	feit not th for e	less tha ach viol	n SIO (lation.	nor

er-rag

Const Const Bong Number Bong Number Bong Number Bong Number Sale On-Site Environmenal/Denny Toske Date Drilling Sarnet Drik Class Version Bong Number Drik Class Version N. E. Si CON Drik Class Version N. E. Si CON Drik Class Version Difference Drik Class Version Soil Propercies Bong Number Soil Propercies Drik Class Version Soil Propercies Bong Number Soil Propercies Drik Class Version Soil Propercies Bong Number Soil Propercies Drik Grass Major Unit Soil Propercies Drik Grig N Major Unit Soil Propercies	State (Depar	of Wisc tment o	onsin f Natur	ni Reso	Route To: ources	☐ Haz. ☐ Unde ☐ Wate	SOIL BORING LOG INFORMATION Haz. Waste Form 4400-122 7-91 Underground Tanks Water Resources Page 1 of 1										
Drychem USA Facility ISB-4 Borng Drilled By (Firm name and name of serve suler) Date Drilling Standed IDate Drilling Standed On Site Environmental/Denny Totske Date Drilling Standed 4/30/97 Soliprobe Drill E By (Firm name name of serve suler) Date Drilling Standed 4/30/97 Soliprobe Drill E By (Firm name name of serve suler) Date Drilling Standed 4/30/97 Soliprobe Drill E By (Firm name name of serve suler) Date Drilling Standed 4/30/97 Soliprobe Drill E By (Firm name name of serve suler) Controp Gradies Feet Peter Peter Drill E By (Firm name name of serve suler) Diverse (Date of the Datameter 2.0 Incase Drill E By (Firm name name of serve suler) Diverse (Date of the Datameter 2.0 Incase Stare Plate IV of Section T N. E S/C/N Lat 0 Feet N Peter B Stare Plate IV of Section T N. E S/C/N Catary Coset C/N it Name (Date of the Sector) B </td <td>Facilit</td> <td>v/Proje</td> <td>ct Nam</td> <td>e</td> <td></td> <td>Other</td> <td colspan="11">Other Page 1 of I License/Permit/Monitoring Number Boring Number</td>	Facilit	v/Proje	ct Nam	e		Other	Other Page 1 of I License/Permit/Monitoring Number Boring Number										
Boring Dollies By (Firm anne and name of cree vilief) Date Drilling Variance Date Drilling Vari	Dry	clean	USA	Facili	ity		SB-4										
Ote-Site Eart obsize Eart obsize 4/30/9/ 4/30/9/ 4/30/9/ Subprote DNR Exercise Elevation Barebole Damater Event Surface Elevation Barebole Damater DNR Exercise View No. Interview Control N. E S/C/N Lat Or Local Grid Localion Event 2.0 Interview State Plane 1/4 of Section T N. R S/C/N Lat Or Event Sold Plane Use of L4 of Section T N. R S/C/N Lat Or Pett Sold Plane Use of L4 of Section T N. R Sold Plane Cold Towork Clev of Village Pett Sold Properties Use of L4 of Section T N. R Sold Plane Sold Plane Pett Sold Plane Use of L4 of Section T N. R Sold Plane Pett Sold Plane Pett Sold Plane Use of L4 of Section T N. R Sold Plane Pett Sold Plane Pett Sold Plane Supplet Sold Plane Sold Plane Sold Plane Sold Plane Sold Plane Pett Sold Plane Supplet Sold Plane Sold Plane Sold Plane Sold Plane Sold Plane Sold Plane <t< td=""><td>Boring</td><td>g Driller</td><td>By (F</td><td>im nai</td><td>me and name of crew chiet) ral/Denny Totske</td><td>Dai</td><td>e Drill</td><td>ing Star</td><td>ted</td><td>Date</td><td></td><td></td><td colspan="3">Drilling Method</td></t<>	Boring	g Driller	By (F	im nai	me and name of crew chiet) ral/Denny Totske	Dai	e Drill	ing Star	ted	Date			Drilling Method				
DRR Endity Well No.: Will Durge Well No.: Common Well Nume Final Same Water Level Surface Elevation Borthole Durnnerer Same Plane N. E S1C/N Lut 0 · · · Feet Local Ord Location (If applicable) Same Plane V4 of V4 of Section N. R S1C/N Lut 0 · · · Peet S Feet E Value Value DNR County Code Civil TownCiv/ or Village Peet S Feet E Same Plane Image State Plane Soil/Rock Description Sign Plane Soil Properties Same Plane Image State Plane Soil/Rock Description Sign Plane Soil Properties Same Plane Image State Plane Image State Plane Soil Properties Soil Properties Same Plane Image State Plane Soil/Rock Description Sign Plane Soil Properties Same Plane Image State Plane Image State Plane Soil Properties Soil Properties Same Plane Image State Plane Image State Plane Soil Properties Soil Properties Same Plane Image State Plane Image State Plane Soil Properties Soil Properties Same Plane Image State Plane Image State Plane Soil Properties Soil Properties </td <td>Un-</td> <td>Sile E</td> <td>IIVIIO</td> <td></td> <td></td> <td></td> <td>4</td> <td>/30/97</td> <td></td> <td></td> <td>4/ 3</td> <td></td> <td></td> <td>3000</td> <td>robe</td> <td></td>	Un-	Sile E	IIVIIO				4	/30/97			4/ 3			3000	robe		
Borney Location State Plane (14 of [/4 of Section T N,R Long of the construction of the spectral of the spectra of the spectral of the spectra of	DNR	Facility	₩e‼ N	ia. W	I Unique Well No. Common Well Name	e Fin	al Stati	c Water Fee	t Level	Surt	ace Ele	vation Feet	orehole Diameter 2.0 Inches				
State Fields If a of the section T N.R. Long 0 ··· Feet S Feet Net Feet S Feet Net Net Long 0 ··· Feet S Feet Net Net Net Long 0 ··· Feet S Feet Net Net Net Long 0 ··· Feet S Feet Net	Boring	z Locati	on		N E SICIN	1	Lat	0, "		Local Grid Location (It applicable)							
County DNR County Code Civit Town(City) or Village Sample Brookfield Sample Soil/Rock Description And Geologic Origin For Bill Bill Bill Image: Signification of the second state of the second sta	State	[/4	of	17	4 of Section T N.R		Long	0 ' "	,	Feet S Feet W							
Watkesha i Brocklew Soul Properties Sample iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Count	у			DNR	County	Code	Civil T	own/Ci	ry/ or	Village						
Sample Suborced by Chapters 144, 147 and 162, Wis, Stats. Completion of dis reports mandatory. Peralters Forder and Ison an S10 or more than S3,000 for each violation. Find not less than S10 or more than S3,000 for each violation.	Wai	ukesha	L 	1	1		BrookItela Soil Properties										
and Geologic Origin For Each Major Unit 5 2 3 3 and Geologic Origin For Each Major Unit and Geologic	San			_												1	
and Getologic Origin For Each Major Unit S group in the start in 1970 or it in the start in the star		2-	Ints	Fce	Soil/Rock Description					_	uoi	7)				Its	
Image: Section of the section of the form is true and correct to the best of my knowledge CLAY, silty, trace fine to coarse grained Image: Section of this form is autorized by Chapters 144, 147 and 162, Wis, State, Completion of this report is mandatory. Penalties: Porfect each violation. Fill the fille of the f	er	h (ii 'erea	Co	u l	Fach Major Unit		SS	hic	ranı	БЮ	lard trati	sture	iid	ii ic	0)/	
z i	quu	engl	low	liqa) S (Jrap .og	Vell Jiag	/Ul	Stand	Moi Con	Lim	Plas Lim	P 20	Con	
1 24 FILL, crushed stone and sand 2 8 -3 3 24 -3	_ <u>z</u> _	<u> </u>	<u> </u>					KXXX	<u></u>		0			1		1	
1 24 Fill, crusted store and sand 2 8 -3 3 24 -5 -5 sand, brown, dry. -6 -7 -7				111	(concrete)		+	$\mathbf{\hat{X}}$									
2 8 -3 3 24 -3 -5 sand, brown, dry. 3 24 -6 -7 -7	1	24		E1	FILL, crushed stone and sand			\otimes									
2 8 -3 3 24 -3 -6 -6 -7 -6 -7 -6 -7 -6 -7 -6 -7 -6 -7 -6 -7 -6 -7 -7 -7 -6 -7 -6 -7 -6 -7 -7 -7				E											ĺ		
2 8 Image: Signature state information on this form is true and correct to the best of my knowledge. 3 24 Image: Signature state information on this form is true and correct to the best of my knowledge. 1 hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Signate Signature Signate Signature								\otimes									
2 8 4 CLAY, sily, trace fine to coarse grained CL 3 24 -5 CLAY, sily, trace fine to coarse grained CL 4 -5 sand, brown, dry. CL CL 5 -6 -7 CL CL 6 -7 -7 CL -7 7 -7 -7 -7 -7 1 hereby certify that the information on this form is true and correct to the best of my knowledge. -7 Signature Firm McLaren/Hart Brookfield, Wisconsin -7 -7 This form is authorized by Chapters 144, 147 and 162. Wis. Stats. Completion of this report is madatory. Penalties: Forfert not less than \$10 nor more than \$10 or imprisoned not less than 30 days, or both for each violation.				Ē_,				\otimes									
3 24 E-4 sand, brown, dry. CLAY, silty, trace fine to coarse grained sand, brown, dry. CL 3 24 E-6 E-7 E-6 E-7 CLAY, silty, trace fine to coarse grained CL 1 1 E-6 E-7 E-6 E-7 E-6 E-7 E-6 E-7 E-6 E-7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </td <td>2</td> <td>8</td> <td></td> <td>Ē</td> <td></td>	2	8		Ē													
3 24 E-3 sand, brown, dry. CLAY, silty, trace fine to coarse grained sand, brown, dry. CL Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. 3 24 E-6 Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. 4 E-6 Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. 5 Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. 1 Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. 1 Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. 1 Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. Image: CLAY, silty, trace fine to coarse grained sand, brown, dry. 1 Image: CLAY, silty, trace fine to coarse grained sand silty, or both for each violation. Image: CLAY, silty, trace fine to coarse vio				E-4													
3 24 4 4 6 7 6 7 1					CLAY, silty, trace fine to coarse grained										ĺ		
J 24 E 6 E 7 Image: Completion of the set of my knowledge. Image: Completion of the set of my knowledge. I hereby certify that the information on this form is true and correct to the best of my knowledge. Firm McLaren/Hart Signature Firm McLaren/Hart Brookfield, Wisconsin 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 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 \$10 days, or both for each violation.		74		-5	sand, brown, dry.												
Image: Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974, Fax: 414-790-1989 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 \$5000 or maprisoned not less than 30 days, or both for each violation.	د	24		F													
E 7 Interest certify that the information on this form is true and correct to the best of my knowledge. Interest certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1989 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.				-6													
-7 -7 I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookrield, Wisconsin Tel: 414-790-1974, Fax: 414-790-1989 This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation.				E			l										
Image: the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974, Fax: 414-790-1989 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.				-7				<u> </u>									
I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 This form is authorized by Chapters 144, 147 and 162. Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation.																	
Interesting certify that the information on this form is true and correct to the best of my knowledge. Interesting certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield. Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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.																	
I hereby certify that the information on this form is true and correct to the best of my knowledge. I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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. Find not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation.																	
I hereby certify that the information on this form is true and correct to the best of my knowledge. I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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. Find not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation.												-					
I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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.																	
I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield. Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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.																	
I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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.												}					
1 hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield. Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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. Find not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation.																	
I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 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.																	
Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974, Fax: 414-790-1989 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.	l hereb	by certit	iy that t	the info	ormation on this form is true and correct to t	the best o	r my k	nowledg	je.								
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.	Signan	ure	<u></u>			Firm	Firm McLaren/Hart										
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.								Brookf Tel: 41	iela, W 4-790-1	isconsi 1974,	n Fax: 4	14-790-	1989				
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.	This fo	nm is a	uthoriz	ed by (Chapters 144, 147 and 162, Wis. Stats. Cor	mpletion	of this	report i	s manda	tory.	Penaltie	s: Fort	eit not	less tha	n SlO i	nor	
	more d	han SS.	000 for	each v	violation. Fined not less than \$10 or more the	han \$100		risoned	not les	s than	30 days	, or bot	n tor e	act viol	anon.		

- 18

State of Wisconsin Route To: Department of Natural Resources Solid Waste							Haz. Waste Form 4400-122 7-9															
Emergency Response Wastewater									rground r Resou	d Tanks irces			Page 1 of 1									
Eacility/Project Name										Other License/Permit/Monitoring Numbe						Boring Number						
Dryclean USA Facility															SB-5							
Boring Drilled By (Firm name and name of crew chief)									Date Drilling Started					picica	a Drilling Method							
Un-	Sile E		micii		IVERC				4,	/30/97			4/ 1	50/97		Jour	robe					
DNR Facifiry Well No. WI Unique Well No. Common Well Name										Final Static Water Level				Surface Elevation Feet				Borehole Diameter 2.0 Inches				
Boring Location											,	Loc	al Grid	Locatio	pplicabl							
State	Plane			N, E S/C/				.	Lat 0 / 7				Seet S				Feer [
	1/4	or	1/-	4 of Section	T	<u>N,R</u>	DNR C		I Long Free S Free C													
Wat	ukesha	l							Brookfield													
San	nple													301	1000			-				
		nts	loot		Soil/Rock I	Description	n						u la					s				
4	(in)	Cour	l n l	And Geologic Origin For					s	ic	m	di	ard ratic	ture ent		2	0	u/ meni				
mbe	ngth	MO	epth		Each Ma	ijor Unit			sc	raph	/ell iagr	IVal	tand	Aois	ini.	last	200	QD Joint				
	Le	Ē		1							20	<u> </u>	NG SG									
			E	(concrete)) 				1	XXX												
т	24		<u>F</u> 1	FILL, cru	ished stone and	l sand				\bigotimes												
	_		Ē																			
			E^2							\otimes												
			E,							\bigotimes								ł				
2	20		F							\bigotimes												
			E4																			
			E	CLAY, si	lty, trace fine	to coarse gra	ained															
2	17		-5	sand, brow	wn, dry.																	
د	12		E							<i>\\\\\</i>												
			-6						•	<u> </u>												
	-																					
		<u> </u>	han in the		this form in the			bert	r mu la				1	!		1		<u></u>				
[hereb	y certit	y that			עזוג נסרח נג נרע	e and correc		JEim		Afat -	ran/Li	2										
Signan	u(=									Brookf	ield. W	isconsi	n		1000							
			<u></u>							Tel: 41	4-790-1	974.	Fax: 4	14-790-	1989	Luce the	n \$10 /					
This fo	orm is a	uthoriz	ed by (Chapters 144	1. 147 and 162	, Wis. Stats.	Comp	letion	of this	report i	s manda	tory.	Penaltie	es: Fort	cit 110[h for e	ach vial	arion.					

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

81-1189
State (Depar	of Wisco ment o	onsin f Natur	al Reso	urces	Route To:	aste ncy Response		az. W nderg	/aste ground	Tanks			SOI For	L BOR m 4400	ING L(-122	OG INF	ORM.	ATIO? 7-9
					L Wastewa	ater	U W D G	ater i ther	Resou	rces					Pag	e l	of	1
Facilit	y/Proje	ct Nam	e Facili	tv	······			Licer	nse/Pe	rmit/M	onitorin	ig Nun	nber	Boring	Numb	er		
Boring	Drilleo	By (F	irm nar	ne and name	of crew chief	·)		Date	Drilli	ng Star	ted	Date	Drillin	ig Com	pleted	Drillin	g Met	hod
On-	Site E	nviror	iment	al/Denny	Totske				4/	30/97			4/3	60/97		Soilp	robe	
DNR	Facificy	Well N	io. ₩	I Unique We	li No. Co	mmon Well Na	ame	Final	Scati	: Water Fee	Level	Surt	ace Ele	vation Feet	B	orehole	Diam 2.0	eter Inches
Boring	Locati	on	l					1.		0 1 "		Loc	il Grid	Locatio	n (If ap	plicable	e)	·····
State	Plane 1/4 (oľ	1/4	4 of Section	N, T	E S/C N.R	C/N	Lo	ong	0			Fe		N S		Feet (
Count	, 1kesha					D	NR Cou	nty C	ode	Civil T Broo	'own/Ci kfield	ry/ or	Village					
San	npie	i						1						Soil	Proper	ties		4
Number	Length (in) Recovered	Blow Counts	Depth In Feet	А	Soil/Rock I nd Geologi Each Ma	Description c Origin Fo ajor Unit	r	and the second	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			-	(concrete)				7		${\times}{$								
1	24			FILL, cru	shed stone and	d sand												
2	20		-3											-				
3	12		4 5 5 	CLAY, si sand, brow	lty, trace fine vn, dry.	to coarse grain	ned		CL									
			-6							<u>, , , , , , , , , , , , , , , , , , , </u>								
																	ļ	
[hereb	i certif	y that t	he info	rmation on t	his form is tru	ie and correct	to the be	st of	my kr	iowledg								
Signan	ure	-					F	Firm		McLa Brookfi Tel: 41	ren/H ield. Wi 4-790-1	art sconsi 974.	n Fax: 41	4-790-	1989			
This fo	orm is an	uthoriz	ed by (each v	Thapters 144 Tiolation. Fi	, 147 and 162 ned not less th	. Wis. Stats. (han \$10 or mor	Complet re than S	ion o 100 c	r this or imp	report is	manda not less	tory. i than	Penaltie 30 days	s: Forf	eit not h for e	less that ich viol	n SLO r ation.	101

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

10.03) (10.03)

State (Depar	of Wisco tment o	onsin f Natur	al Reso	ources	Route To: Solid W: Emerger Wastewa	aste icy Response iter	Ц н Ц и Ц м	laz. W Inderg Vater 1	√aste grouno Resou	t Tanks irces			SOI For	1L BOR π 14 00	ING L(-122	OG INF	ORNI	ATION 7-91
						- 	0	ther			Conitori	ng Nur	nber	Boring	Pag	er l	of	1
Facilit	ry/Proje celean	ct Nam USA	e Facili	ſY				Licei	nse/P	rmit/M	0011071	18 14UI.		SB-7				
Boring	g Drilleo	i By (F	irm nar	ne and name	of crew chief)		Date	Drill	ing Star	ted	Date	Drillir	ig Com	pleted	Drillin	ig Met	thod
On-	Site E	nviro	nment	al/Denny 7	Fotske				4/	/30/97			4/3	30/97		Soilp	robe	
DNR	Facility	Well N	ia. \\	I Unique Wel	I No. Co	mmon Well N	ame	Final	l Stati	c Water Fee	t Level	Surt	ace Ele	vation Feet	8	orenoie	2.0	leter Inches
Boring	g Locati	on			N	E SIC		{	Lat	0 ' "		Loc	al Grid		n (Iř ap N	plicabl	e)	
State	Plane	of	1/-	4 of Section	T,	N.R	-/11	L	ong	0 / "			Fe	er 🗌	s		Feet	
Count	y					D	NR Cou	inty C	ode	Civil I	own/C	iry/ or	Village					
Wai	ukesha			1				i		Broo				Soil	Proper	Ties]
					Soil/Doole I	Description												
	Û P	unts	l Fee	A	id Geologi	c Origin Fo	r				_		lion	o ع				nts
ber	uh (j vere	, Co	H H		Each Ma	ijor Unit	-		C S	phic	l gran	/FII	dard	istur	uid	stic	00	D/ D/
Чши	Leng	Blov	Dep						U S	Graj Log	Wel Dia	DID	Star Pen	Col	ĒĒ	Pla Liu	P 2	lã <u>S</u>
		· · · · · · · · · · · · · · · · · · ·	-	(concrete)														
			E1	FILL, crus	hed stone and	i sand		~		\bigotimes								
1	18		E															
			<u>E</u> 2							\bigotimes								
										\bigotimes								
2	6		-3							\bigotimes								
-			F.							\bigotimes								
			-4															
		;																
	-				•													
				l														
						······												<u> </u>
[hereb	y certif	y chat t	he info	rmation on th	is form is tru	e and correct	to the be	est of	my kr	nowledg								
Signan	ure							rim		McLa	ren/H	art	n					
										Tel: 41	4-790-1	974,	Fax: 4	14-790-	1989			
This ro	orm is a	uthoriz	ed by C	hapters 144.	147 and 162	, Wis. Stats.	Complet	ion o	f this	report i	s manda	itory.	Penaltie	s: Fort		less that the viol	n SLO i ation.	nor
more d Each d	han \$5.0	000 for	each v d viola	tion is a sepa	ied not less th rate offense.	ian 310 or moi pursuant to ss	re than 3 [44,99]	o 001 c and 1	or imp 62.06	risoned , Wis. S	not les. Stats.	s man	n anàs					

. ~~~

Interview Project of t Description Dryclean USA Facility License/Permu/Monuoning Number Sara Barta State Sara Complexed Sara State Don's the Environmental/Denny Toske Date Drilling Stated Date Drilling Stated Date Drilling Stated Date Drilling Stated Dirk Facility Weil New Windextand France Complexed Sollprobe Dirk Facility Weil New Windextand Complexed Sollprobe Dirk Facility Weil New Windextand Complexed Sollprobe State Plane N, E S/C/N Lat Complexed (4 of Uring Stated) Uring Stated Dirk County Code Circl Town Circly or Village State Plane N, E S/C/N Lat Control (4 of Uring Stated) Dirk County Code Circl Town Circly or Village Soil Properties Sample Soil WRock Description Soil Soil Properties Soil Properties 1 24 E Fill Fill Countree) 1 24 E Fill Countree) Circl Village 2 8 E Soil Properties Soil Properties 3 24 E Circl Village Circl Village	State o Depart	of Wisco ment of	onsin f Natur	al Reso	Route To: Durces Solid Waste E Emergency Response U Wastewater V	Haz. W Underg Water	Vaste ground Resou	i Tanks rces			SOI For	L BOR m +400	ING L -122	DG INF	ORM	ATION 7-9
Facility/Permit Manadrag values Date Defining Started Set 8 Dyrycleau USA Facility Set 8 Dons Dinked By (Firm and and a force wheth) Date Defining Started Set 8 On-Site Environmental/Deamy Totske Date Defining Started Set 8 DRR Exclusp Wei No. (W Using Wei Mene Wei No. (Common Weil Name Final Starte Water Level Set 8 Deriver Wei No. (W Using Wei Mene Wei Name N. E. S/C/N Lat. Set 7 Lots Diversity Set 8 Set 7 N. E. S/C/N Lat. Set 7 Lots Diversity Soil Procentics Soil Procentics Soil Procentics Feet N. E. S/C/N Walkesha Date Control Code Civil Toward Ch/ ar Villate Soil Procentes Feet N. E. S/C/N Start Bits Soil Procectics Soil Procectics Soil Procectics Soil Procectics Soil Procectics Start Bits Soil Procectics Soil Procectics Soil Procectics Soil Procectics Start Bits Soil Procectics Soil Procectics Soil Procectics Soil Procectics Start Bits Soil Procectics Soil Procectics Soil Procectics Soil Procectics						Other				- 3/110	abac	Boring	Pag Numb	e l	of	1
DryCleard OAA Values Date Drilling Samed Date Drilling Completed Drilling Method Orn-Site Environmental/Detuny Totske Date Drilling Samed 4/30/97 Soliprobe DNR Facility Well No. Will No. Will No. Borna Oile By (Fin name and same of crew chief) Date Drilling Samed Date Drilling Completed Drilling Method DNR Facility Well No. Will No. Will No. Will No. Soliprobe DNR Facility Well No. Will No. Will No. Soliprobe Peet 2.0 Inchestion Same Flas Soliprobe N. E. S/C/N Lat 0 ··· Local Grid Location (f applicable) Same Flas Same Flas Soliprobe Borna Gride By (Fin name and same frage sector) Soliprobe Soliprobe 14 of I(4 of Section T N. E. S/C/N Lat 0 ··· Local Grid Location (f applicable) Same Flas Soliprobe Soliprobe Brockfield Soliprobe Soliprobe Same Flas Soliprobe Soliprobe Grid By (Fin name and same same same same same same same same	Facilit	y/Proje	ct Nam TIS A	e Facili		Lice	nse/Pé	rmit/M	onitoriii	g radii	1061	SB-8				
On-Site Environmental/Denny Totske 4/30/97 Soliprobe DRS Facility Wall No. W Darge Well No. Common Well Name Flat Static Water Level Feet Surfice Elevention Barchold Datateter Feet 2.0. Inches State Plane N. E. S/C/N Lat 0.1 Pett 2.0. Inches State Plane V4 of Section N. R. S/C/N Lat 0.1 Pett Sector Plane Valuessha DNR County Code Circl TownCldy: or Village Pett Sector Plane Sector Plane Sample Signed Soli/Rock Description Signed Soli/Rock Description Signed Signed Soli/Rock Description 1 24 E Call Construction (Int applicate) Each Major Unit Signed Signed Signed Signed 2 8 -1 Clary: signed and sand Signed Signed Signed Signed Signed 3 24 -1 Clary: signed and sand Clary: signed and sand Clary: signed and sand Signed Signed Signed 2 8 -1 Clary: signed and sand Clary: signed and sand Signed Signed Signed Signed 3 24 -7 Clary: signed and sand S	Boring	Drilleo	1 By (F	irm na	me and name of crew chier)	Date	Drill	ng Star	ted	Date	Drillin	ig Com	pleted	Drillin	ig Met	hod
DNR Feeling Weil No., WY Usiges Weil No. Common Weil Name Pland Static Water Level Surface Elevision Burthoe Elevisio	On-	Site E	nvirot	nment	tal/Denny Totske		4/	30/97			4/3	30/97		Soilp	robe	
Banny Location State Plane N, E S/C/N Lat 0 · · · Coal Grid Location (If aplication) State Plane I/4 of Election T N, R Long 0 · · E I/4 of I/4 of Section T N, R Long 0 · · E Walkesha INR Country Clay or Village Borokfield Soil Properties Image: Soil Properties Sample Image: Soil/Rock Description And Geologic Origin For Each Major Unit Soil Properties Image: Soil Properties I 24 Image: Soil Properties Image: Soil Properties Image: Soil Properties Image: Soil Properties I 24 Image: Soil Properties Image: Soil Properties Image: Soil Properties Image: Soil Properties I 24 Image: Soil Properties Image: Soil Properties Image: Soil Properties I 24 Image: Soil Properties Image: Soil Properties Image: Soil Properties I 24 Image: Soil Properties Image: Soil Properties Image: Soil Properties I 24 Image: Soil Properties Image: Soil Properties Image: Soil Properties I 24 Image: Soil Properties Image: Soil Properties Image: Soil Properties I 24 Image:	DNR	Facility	₩e‼ N	io. W	I Unique Well No. Common Well Name	Fina	l Scati	e Water Fee	Level	Surf	ace Ele	vation Feet	E	lorehole	: Diam 2.0	eter Inches
State Plane N, E S/C/N Long 0 · · · · · Feet N N Feet N Feet N Feet N Feet N Feet N N Feet N Feet N </td <td>Boring</td> <td>Locati</td> <td>on</td> <td></td> <td></td> <td>}</td> <td>[at</td> <td>0 ' "</td> <td></td> <td>Loca</td> <td>al Grid</td> <td>Locatio</td> <td>n (If ap</td> <td>plicabl</td> <td>e)</td> <td>- -</td>	Boring	Locati	on			}	[at	0 ' "		Loca	al Grid	Locatio	n (If ap	plicabl	e)	- -
County Walkesha DNR County Code Civit Town/City/ or Village Brookfield Sample Soil/Rock Description And Geologic Origin For Each Major Unit Soil/Rock Description To Soil Properties 1 24 2 8	State	Plane 1/4 -	of	17	N, E S/C/N 4 of Section T N,R	L	ong	0 ' "			Fe	et 🗌	м S		Feet	
Sample Soil/Rock Description Jungton Soil/Rock Description And Geologic Origin For Each Major Unit Soil/Rock Description 1 24 1 24 2 8 3 24 5 7 6 7 7 CLAY, sity, trace fine to boarse grained sand, brown, dry. 3 24 7 6 7 CLAY, sity, trace fine to boarse grained sand, brown, dry.	Count	y 1kesha			DNR Co	unty C	Code	Civil T Broo	'own/Cii kfield	ry/ or	Village					
Image: State of the state information on this form is true and correct to the best of my knowledge. Image: State of the state of th	San	nple										Soil	Prope	ties		4
2 3 24 -1 (concrete) 1 24 -1 FILL, crushed stone and sand 2 8 -3 -3 3 24 -3 -3 -3 24 -5 sand, brown, dry. -5 sand, brown, dry. -6 -7 -7 -7 -7 -7 -7 1 hereby certify that the information on this form is true and correct to the best of my khowledge. 1 NcLaren/Hart Signature -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7	lumber	ength (in) tecovered	slow Counts	Jepth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit		USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
1 24 FILL, crushed stone and sand 2 8 -3 3 24 -3		<u></u>														
1 24 -2 2 8 -3 -3 24 -3 -3 24 -5 -5 sand, brown, dry. -6 -7 -7 <td></td> <td></td> <td></td> <td>Ē,</td> <td>FILL, crushed stone and sand</td> <td>-1</td> <td></td> <td>\otimes</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				Ē,	FILL, crushed stone and sand	-1		\otimes								
2 8 -3 -4 CLAY, silty, trace fine to coarse grained 3 24 -5 sand, brown, dry. -6 -7 -6 -7 -7 -6 -7 -6 1 -7 -7 -7 1 -6 -7 -7 1 -7 -7 -7 -7 -7 -7 -7 1 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7<	1	24														
3 24 E-5 sand. brown, dry. -6 -7 -6 -7 -7 -7 -7 -7 I hereby certify that the information on this form is true and correct to the best of my knowledge. -7 I hereby certify that the information on this form is true and correct to the best of my knowledge. -7 Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989	2	8			CLAY, silty, trace fine to coarse grained		CL									
I hereby certify that the information on this form is true and correct to the best of my knowledge. I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hart Brookfield, Wisconsin Tel: 414-790-1989 Tel: 414-790-1989	3	24			sand, brown, dry.											
I hereby certify that the information on this form is true and correct to the best of my knowledge. I hereby certify that the information on this form is true and correct to the best of my knowledge. Signature Firm McLaren/Hartt Brookrield, Wisconsin Tel: 414-790-1974. Fax: 414-790-1989 Tel: 414-790-1974. Forfeit not less than \$10 nor		-														
Brookfield, Wisconsin Tel: 414-790-1989 Tel: 414-790-1974. Fax: 414-790-1989	I hereb	by certit	'y that t	the info	ormation on this form is true and correct to the b	pest of Firm	my ki	nowledg	e.							
the Charles 111 117 and 153 W/ Constraint Salar Salar and the second second Decision (101 100 1000 1000 1000 1000	Signan							WICLA Brookfi Tel: 41	eld, Wi 4-790-1	sconsi 974.	n Fax: 41	(4-790-	1989 eir nor	less tha	n \$10	nor

more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not le Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State o Depart	of Wisco ment of	onsin f Natur	al Reso	ources	Route To: Solid Was Emergence Wastewar	ste cy Response ter		az. W Inderg	/aste round Resou	Tanks			SOI Fon	L BOR. m 4400	ING L(-122)G INF	ORM.	ATION 7-91
								ther				a Nur	her	Boring	Pag Numb	e l	oť	1
Facilit	y/Projec	ct Nam t is a	e Facili	rv				Licer	nse/Pe	rmit/M	onitoru	ig riun	1001	SB-1	1			
Boring	Drilled	By (F	irm nar	ne and name of	of crew chief)			Date	Drilli	ng Sun	ted	Date	Drillin	g Com	pleted	Drillin	g Met	hod
On-	site Er	iviron	menta	al/Denny T	otske				1/	10/98			1/1	.0/98		Soilp	robe	
DNRI	Facility	₩e‼ N	io. W	I Unique Well	No. Con	nmon Well Na	ıme	Final	Statio	Water Fee	Level	Surf	ace Ele	vation Feet	В	orehole	: Diam 2.0	eter Inches
Boring	Locatio	on	reactions in the				<u> </u>	·		0 : "		Loc:	al Grid	Locatio	n (If ap	plicable	e)	_
State	Plane		• •	4 - 5 6	N,	E S/C	:/N			0, "			Fe		N S		l Feer l	L E T W
County	1/4 0	<u> </u>		4 of Section	l		NR Cou		ong Code	Civil T	'own/Ci	ry/ or	Village			······		
Wai	ıkesha			I						БГОО	A leiu			Soil	Proper	ties		
San	nple			_														1
l	2-	ults	Feel	S	oil/Rock D	escription						_	uo	0				115
er	h (ii 'erec	Cot	E	A	Each Mai	ior Unit	ſ		S	hic	ram	FID	dard	sture	ii d	ii ic	0	>/
quir	sngl	ΜO	ept		Daca Maj				S (irap .og	Vell Diag	/dl	stane bene	Moi	Linu	Plas Lim	P 20	Con
_ <u></u>	122	B	- 0									<u>منا</u>	<u> </u>	20				1
					ad crono			-1		\times								
1	24		-1	FILL, CIUSI	ieu stone					\bigotimes								
			Ē							XXX								}
				SILT, claye sand, brown	ey, some fine n, dry.	to coarse grai	ned		ML									
2	20		3 	CLAY, silt	y, trace fine to	o coarse grain	ied		CL									
			-	sand, brown	n, dry.	•												
			-															
			E_s															
3	12		-															
			-6							[[]]]]								
)			
			hairs-	marion on th	is form in tra-	and correct	to the h-	est of	my kr	owledg			1	1		<u> </u>		
[hereb	y certif	y unat t					11	Firm		Mola	ren/H	art						
orginali	41 9									Brookfi Tel: 41	ield. W 4-790-1	isconsi 1974.	n Fax: 4	[4-790-	1989			
This fo	orm is a	uthoriz	ed by (Chapters 144.	147 and 162.	Wis. Stats.	Complet	tion o	f this i	eport is	s manda	tory.	Penaltie	s: Fort	eit not	less tha	n \$10	nor

This form is authorized by Chapters (4), its, its and 102, wis, stats. Completion of difference of the report is mandatory. Fortalities from the state of the sta

State (Depar	of Wisco unent of	onsin f Natur	al Reso	R Durces	oute To:] Solid Wa:] Emergend	ste cy Response		nz. Waste ndergroun	d Tanks			SOI For	L BOR m 4400	NG L(-122	OG INF	ORM	ATION 7-91
					1 Mastemat	er		her	nces					Pag	je l	of	1
Facilit	ry/Proje	ct Nam	e .,.					License/P	ermit/M	onitorin	ig Nun	nber	Boring	Numb 7	er		
Dry	clean	USA	Facili	ry ne and name of	rew chief)			Date Drill	ing Star	ted	Date	Drillin	g Com	pleted	Drillin	ig Mer	hod
Ou-	site Er	iviror	ment	al/Denny Tot	ske			1.	/10/98			1/1	0/98		Soilp	robe	
DNR	Facility	Well N	io. W	I Unique Well N	o. Con	nmon Well N	Name	Final Stati	c Water Fee	Level	Surt	ace Ele	vation Feet	B	orehole	: Diam 2.0	leter Inches
Boring	Locatio	on					!		0 1 1		Loca	al Grid	Locatio	n (lf aț	plicabl	e)	
State	Plane			4 . 6 C	N,	E s/	C/N	Lat	0 ' "			F-		N S		Feer	∐ E ∏ w
Court	1/4 0	of	1/4	4 of Section	<u> </u>	<u>N,R</u>	DNR Cour	I Long	Civil T	'own/Ci	ry/ or	Village					
Wai	y ukesha							·	Broo	kfield		,					
Sar	nple												Soil	Proper	rties		-
Humber	Length (in) Recovered	Blow Counts	Depth In Feet	So And	l/Rock D Geologic Each Maj	Description Origin F jor Unit	n for	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
				(concrete)					$\times\!\!\times\!\!\times$								
1	24			FILL, crushed	i stone												
				SILT, clayey, sand, brown,	some fine dry.	to coarse gra	ained	ML									
2	24		4	CLAY, silty, sand, brown,	trace fine to dry.	o coarse gra	ined	CL									
3	24		5														
						—.,,,_,_,,,,,,,,,,,,,,,,,,,,,,,,,,	<u></u>										
			he info	mation on this	form is rain	+ and correct	r to the he	st of my k	l	<u> </u> 		1	I		<u></u>	Noncount of Contrast of	<u></u>
Signan	ure	7 4140						irm	McLa Brookf Tel: 41	ren/H ield, Wi 4-790-1	art sconsi 974,	n Fax: 4	14-790-	1989			
This fo	orm is au	uthoriz	ed by C	Chapters 144, 14 violation. Fined	7 and 162.	Wis. Stats.	Completi	on of this	report is	s manda not les:	tory. s than	Penaltie 30 days	s: Fort	eit not h for e	less tha ach viol	n 510 i .ation.	101

more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not i Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06. Wis. Stats.

•

805-548

State o Depar	of Wisco ment of	onsin f Natur	ni Resc	Route	To: lid Waste hergency Respor	(nse (] Haz.] Unde	Waste rgroun	d Tanks			SOI For	ιL BOR π 4400	ING L(-122	OG INF	'ORM.	ATION 7-9
				<u> </u>	astewater	(] Wate	- Kesoi	Ifces					Pag	:= 1	of	1
Facilit	y/Proje	ct Nam	e		Annual and a second		Lic	ense/P	ermit/M	lonitorir	g Nur	nber	Boring	; Numb ?	er		
Dry	clean	USA	Facili	ty							1Date	Drillin	SB-1) niered	Drillin	a Mar	had
Boring	Drilleo	1 By (F	irm nar	ne and name of crew	chief)		Da	te Drill	ing Star	τεα	Dau	- Di III.		procee	C. it		100
On-	site EI			in Denniy TOBRE				1	/10/98			1/1	10/98		Sout	robe	
DNR	Facility	Well N	ia. W	I Unique Well No.	Common We	ll Name	Fin	ial Stat	ic Water	r Level	Surt	ace Ele	vation	В	lorehole	:Diam 2∩	leter
									Fee	:[Loc	al Grid	Locatio	in (If ap	plicabl	$\frac{2.0}{e}$	menes
State J	l Locali Plane	011			N, E	S/C/N		Lat	0 ' '	•				N			Ξε
•	1/4	of	1/4	4 of Section	T N.R		1	Long	0 ' "	•		Fe	et 🗌	S		Feet	<u>w</u>
County	, kesha					DNR	County	Code	Civil 1 Broo	rown/Ci kfield	ry/or	Village					
San	nple	<u> </u>	1	[1				Soil	Prope	rties		
				Sail/D	aale Daaaningi												
	2-1	stur	Fee	And Ce	ock Descripti	Eor					_	ion	0				Its
сĽ	h (i /ere	Col	=	Fac	h Major Unit			SS	hic	Lan	FIC	darc	stur	ii d	ii ic	0)/
quur	sugt	ΜO	eptl		a major o an	•		SI	rap	Vell Diag	JD/	lan.	Moi	Lig	Plas Lim	P 20	10 Sol
<u> </u>	Jæ	В							NXXX		ويتييا					<u> </u>	
			-	(concrete)					XXX								
, 🔳	74		-1	FILL, crushed sto	ne											1	
1																	
			-2														
				SILT, clavey, son	e fine to coarse	grained		ML									
2	8		-3	\sand, brown, dry.		3	Γ	CL	11/1/								
				CLAY, silry, trace	fine to coarse g	grained											
			-4	sand, brown, dry.													
			-														
3	24																
			-														
			Ę														
			-					4									
									}								
								1									
																1	
											<u> </u>						<u> </u>
[hereb	y certif	y that t	he info	rmation on this form	is true and cort	rect to th	ne best o	r my k	nowledg	;e.							
Signan	ILG						Fim	r	McLa	iren/H	irt	-					
									Brookt Tel: 41	4-790-1	974,	Fax: 4	[4-790-	1989			
This fo	rm is a	uthoriz	ed by C	hapters 144, 147 ar	d 162, Wis. Stat	ts. Con	pletion	of this	report i	s manda	tory.	Penaltie	s: Fort	eit not	less that	n StO r	nor

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties. Portect not less than or or 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.

State	of Wisco	onsin F Natur	nl Reso	Route To:	Haz V	Waste				SOI For	L BOR. m 4400	ING L(-122)G INF	ORM;	ATION 7-91
Depar	ment of			Emergency Response	Under	ground	d Tanks								
				U Wastewater	Water	Resou	irces					Pag	e l	of	1
Facilit	y/Projec	ct Nam	e		Lice	nse/P	ermit/M	lonitorin	g Nun	nber	Boring	Numb	er		
Dry	clean	USA	Facili	ty					Dee	Deillie	SB-1	4	Dellie	a Mar	
Boring	Drilled	By (F	irm nan	ne and name of crew chief)	Date	: Drill	ing Star	ted	Date	: Dunn		piered	Seile	ig wiet	DOU
On-	site El	IVILUD	uncita			L	/10/98			1/1	.0/98			robe	
DNR	Facility	We‼ N	ia. W	I Unique Well No. Common Well Name	Fina	l Stati	c Water	Level	Surf	ace Ele	vation	B	lorehole	Diam	eter
			<u> </u>				Fee	1	Loca	al Grid	Locatio	n (If ap	plicabl	2.0 e)	uicnes
Boring	g Locatio Plane	511		N, E S/C/N		Lat	0 ' "	,				N		l	Ε
	1/4 0	or	1/4	4 of Section T N.R		ong	• • 0			Fe	et 📋	<u>s</u>		Feet	<u>w</u>
Count	y ukesha			DNR Co	ounty (Code	Broo	kfield	ry/ or	viitage					
San	npie						1			[Soil	Proper	rties		-
	Ţ	S	G	Soil/Bock Description											
	ÊB	unt	l Fe	And Geologic Origin For	ł			=	a	d tion	5 -				suts
ber	, th Ver	Ŭ	h h	Each Major Unit		C S	phic	grau	ι.J.	ndar uetra	istu nten	nit	stic	8) D
4um	eng Recc	Blov	Dep			U S	Gra	Vel	PIC	Star	Col		P.a.	P 2	a ≊ S
1	24		5	FILL, clayey silt, some to little fine to			\otimes								
			-	coarse grained sand, dark brown, moist.							i				
		1	Ē												
			\mathbb{E}_2			~	\bigotimes								
2	18		Ē	CLAY, silty, trace fine to coarse grained		CL									
			-3	sand and gravel, brown, moist.	}										}
		1													
2	24	I	-4												
د	24	i													1
		1	-5												
					1										
4	24		E-6												
			E'												
		i	E s				<u> []]]]</u>								
-		l													
					1										
					1										
]		
)		
										1					
			<u> </u>				<u> </u>			<u> </u>	1	1)		<u>!</u>
[hereb	y certif	y that t	he into	rmation on this form is true and correct to the l	Dest of	my k									<u></u>
Signan	ure						Brookf	iren/H: ield, Wi	uri sconsi	n					
							Tel: 41	4-790-1	974.	Fax: 4	4-790-	1989	1-4-	. 610	
This fo	nt is an	uthoriz	ed by C	Chapters 144, 147 and 162, Wis. Stats. Comple	etion o	of this	report i	s manda	tory.	Penaltie	s: Forf	eit not	iess tha	וחזכזו	101

6. c. ng

1 2

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalities: Portect not less than or the 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.

State (of Wisco	onsin f Natur	al Reso	Ro urces	ute To: Solid Wast	e	□ H:	az. W	Vaste				SOI For	ш 1 400 ш 4400	ING LO -122	JG INF	ORM	ATION 7-91
Deput					Emergency Wastewater	Response		nderg ater	ground Resou	i Tanks rces					Pag	;e 1	of	1
Facili	ry/Projec	ct Nam	e		••••••••••••••••••••••••••••••••••••••			Lice	nse/Pe	rmit/M	onitorit	ng Nun	nber	Boring	Numb	er		
Dry	clean	USA	Facili	y ne and name of c	rew chiet)	······································		Date	Drilli	ng Star	Ted	Date	Drillin	I SB-1 Ig Com	pleted	Drillin	g Met	hod
Boring On-	site Er	viron	menta	al/Denny Tots	ke			Juio	1/	10/98			1/1	10/98		Soilp	robe	
DNR	Facility	₩e‼ N	io. W	l Unique Well No	≯. [Comn	non Weil N	iame	Fina	l Stati	c Water Fee	· Level t	Surt	ace Ele	vation Feet	B	orehole	: Diam 2.0	eter Inches
Boring	Locatio	n	مىنىڭ <u>تىنىنى</u>		N	E S//	C / Ní		Lat	0'"	1	Loca	al Grid	Locatio	n (If ap N	plicable	e)	
State	Plane 1/4 (of	1/4	4 of Section	T	N,R		L	ong	0 ' "			Fe		s		Feet	<u> </u>
Count	y ikesha						NR Cou	nty C	Code	Civil T Broo	own/C kfield	iry/ or	Village					
Sar	nple		Ī		·····								ļ	Soil	Proper	ties		4
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil And (E	/Rock De Geologic (Each Majo	scription Origin Fo or Unit	Dr		USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
1	24			FILL, clayey s coarse grained	ilt, some to sand, dark	little fine u brown, moi	o ist.		CL									
2	24			CLAY, silty, n sand and grave	race fine to : il, brown, m	coarse grai oist.	ned											
4	24			(0.1 foot sand .	seam at 4.5	feet, wet)												
			-7-8		•													
I hereb	y certif	y that t	he info	rmation on this fi	orm is true :	ind correct	to the be	st of	my ki									
Signar	ure						Į.			MCLa Brookf Tel: 41	ren/H ield, W 4-790-1	art isconsi 1974,	n Fax: 4	14-790-	1989			
This for more t	orm is an han \$5.(uthoriz 200 for	ed by C each v	Chapters 144, 147 violation. Fined of	7 and 162. V not less than	Vis. Stats. \$10 or mo	Completion for than S	ion o	f this or imp	report is risoned Wis	s manda not les: Stats	itory. s than i	Penaltie 30 days	s: Fort , or bot	eit not h for e	less that ach viol	n S10 i ation.	tor

- 11/28

State o Depar	of Wisco unent o	onsin f Natur	al Reso	Route To: aurces Solid Was Emergenc Wastewate	te y Response tr	□ Ha □ Un □ Wa	iz. Waste idergroun ater Reso	d Tanks urces			SOI For	L BOR m 4400	ING L -122	OG INF	ORM	ATION 7-9
						<u> </u>	her License(B	armir/N		σ Νυπ	nber	Boring	Pag Numb	ge <u>l</u> Jer	of	1
Facilit	y/Proje clean	ct Nam USA	e Facili	ry			LICENSE/ F	CITIIO IV	(onnor a	0		SB-1	.6			
Boring	, Drilled	i By (F	irm nar	ne and name of crew chier)			Date Dril	ling Star	ted	Date	Drillir	ig Com	pleted	Drillir	ng Me	thod
On-	site Ei	nviron	ment	al/Denny Totske			1	/31/98			1/3	31/98		soil j	probe	;
DNRI	Facility	Well N	ia. W	I Unique Well No. Com	mon Well Nar	me l	Final Stat	ic Water Fee	· Level	Surt	ace Ele	vation Feet		sorenoid	= Dian 2.0	lnches
Boring	Locati	on					Lar	0 ' "	,	Loca	al Grid	Locatio	n (If a	plicabl	e)	
State 1	Plane 1/4	oř	1/4	A of Section T	E S/C/ N,R	/ N	Long	0 ' "			Fe	et 🗌	N S		Feet	
County	, ikesha				DN	IR Cour	nty Code	Civil 1 Broo	fown/Ci kfield	ry/ or	Village					
San	nple										ļ	Soil	Prope	rties	<u> </u>	-
umber	ength (in) ecovered	low Counts	epth In Feet	Soil/Rock Do And Geologic Each Majo	escription Origin For or Unit		JSCS	Jraphic .og	Vell Diagram	ID/FID	Standard	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
_ <u></u>	14	<u> </u>	-	()										1		
			-		······		~									
1	24		-1	FILL, crushed stone			-/ ML									
				SILT, clayey, some fine to sand, light brown, dry.	o coarse grain	aed										
2	24			CLAY, silty, trace fine to sand, brown, moist.	coarse graine	ed	CL									
3	24															
			7					<u>×17111.</u>								
	-															
															And a line with the second	
														-		
[b	v certif	v that t	he info	mation on this form is true	and correct to) the bes	i stořmy k	nowleds	<u>e.</u>		8		·			
Signan	ire ire	y unact				F	im	McLa Brookt	iren/H ield, Wi	art sconsi	n Fact f	1.700	DRDI			
This fo	m is a	uthoriz	ed by (Chapters 144, 147 and 162.	Wis. Stats. C	ompletic	on of this	report i	4-790-l s manda	974. 	Penaltie	s: Fort	eit not	less tha	n \$10	nor

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalities, Forten interests and not 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, gursuant to ss 144.99 and 162.06. Wis. Stats.

State	of Wisco	onsin	1.0	Route To:	<u> </u>					SOI	L BOK	-177 -177			
Depar	unent of	r Natur	ai Keso	Emergency Response		ierground	Tanks			101					
			•	L] Wastewater	U Wai	ter Resou er	rces					Pag	e 1	of	1
Facilit	y/Projec	ct Nam	e Facili			icense/Pe	rmit/M	onitorir	ng Nun	nber	Boring SB-1	, Numb 7	er		
Dry	clean	USA By (F	irm nar	me and name of crew chief)		ate Drilli	ng Star	ted	Date	Drillin	g Com	pleted	Drillin	ig Met	hod
On-	site Er	iviror	mentz	al/Denny Totske		1/	10/98			1/1	10/98		Soilp	robe	
DNR	Facility	Well N	ia. W	Unique Well No. Common Well Nar	ne F	inal Stati	Water Fee	Level	Surt	ace Ele	vation Feet	B	orehole	: Diam 2.0	eter Inches
Boring	Locatio	on		N F S/C/	N	Lat	0, "		Loc	al Grid	Locatio	n (If ap N	plicable	e)	
State	Plane 1/4 (of	1/4	4 of Section T N,R		Long	0 ' "			Fe	<u>er 0</u>	s		Feet (
Count	y ukesha				R Count	ry Code	Civil 1 Broo	'own/C kfield	iry/ or	Village					
Sar	nple									ļ	Soil	Proper	τies		4
Vumber	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit		USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limít	P 200	RQD/ Comments
2	24			FILL, silty fine to coarse grained sand dark to light brown, moist. CLAY, silty, trace fine to coarse grained sand and gravel, brown, moist.	d	CL									
3	24														
4	13					_									ran de la compañía d
[heret Signat	by certif	y that t	he info	ormation on this form is true and correct to	the besi		nowledg McLa	e. ren/H	art						
_							Brookf Tel: 41	ield. W 4-790-1	isconsi 1974,	n Fax: 4	14-790-	1989 Teit por	less tha	n \$10	nor
This for more to Each of	orm is au han \$5.0 tay of co	uthoriz 300 fot ontinue	ed by (· each v d viola	Chapters 144, 147 and 162, Wis, Stats, Co violation, Fined not less than \$10 or more ttion is a separate offense, pursuant to ss 1-	ompletio than SI 44.99 ar	on of this 00 or imp nd 162.06	report is risoned Wis. S	s manda not les Stats.	s than	30 days	, or bot	th for e	ach viol	lation.	

1...3

State (Depar	of Wisco ment o	onsin f Natur	ni Reso	ources	Route To: Solid Waste Emergency Response		faz. W Jnderg	Vaste ground	i Tanks			SOI For	IL BOR m 4400	ING L(-122	OG INF	ORM	ATION 7-91
					m histowator الس		Other		1					Pag	je l	of	1
Facilit	y/Proje	ct Nam	e T'''				Lice	nse/Pe	rmit/M	lonitori	ng Nur	nber	Boring	r Numb 8	er		
Dry	clean	USA	Facul	ry ne and name	of crew chier)		Date	Drill	ing Star	ted	Dat	e Drillir	I SD-1 1g Com	pleted	Drillin	ig Mei	thod
Boring On-	site Ei	nviror	ment	al/Denny 1	Totske		Date	1/	/31/98			1/:	31/98	-	soil g	robe	;
DNR	acility	Well D	ia. W	I Unique We	II No. Common Well Na	те	Fina	l Stati	c Water	Level	Sur	face Ele	vation	E	orehole	Dian	leter
							<u> </u>		Fee	:t	Loc	al Grid	Locatio	n (If aț	plicabl	<u>2.0</u> e)	unches
State	Plane	011			N, E S/C	/ N		Lat	0, 4	,				N			Ξε
	1/4	of	1/-	4 of Section	T N,R		L	ong	0		1	Fe		S		Feet	
County	, ikesha	L .				VR Cou	unty C	Code	Civil 1 Broo	kfield	ity/ or	village		-			
San	nple												Sail	Proper	Ties		4
Number	Length (in) Recovered	Blow Counts	Depth In Feet	A	Soil/Rock Description nd Geologic Origin For Each Major Unit	-		USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			F	(concrete)					\bigotimes								
			E,	FILL, crus	ihed stone		-7		\bigotimes								
1	18			L					\times								
2	6			SILT, clay sand, brow	ey, some fine to coarse grair m, dry.	ned		ML									
			h		nie form is mus and an			my k-	owlada			1		<u> </u>			1
I hereb Signan	y certif	y that t			is form is true and correct to		Firm	any K:	McLa Brookf Tel: 41	ren/H ield, W 4-790-	art isconsi 1974,	in Fax: 4	14-790-	1989			
This to more th	rm is at ian \$5.0	uthoriz	ed by C each v d viola	Thapters 144, violation. Fir	147 and 162, Wis, Stats. C ned not less than \$10 or more rate offense, pursuant to ss 1	omple e than 1 141,99	tion o \$100 c and 1	r this or imp 62.06	report is risoned Wis. S	s manda not les Stats.	atory. s than	Penaltie 30 days	s: Forf	eit not h for e	less that ach viol	n S10) ation.	100

1 3

State Depar	of Wisco ument of	nsin Natur	al Reso	urces [Route To:	aste	Пн	laz. V	Waste					SOI For	L BOR n 4400	ING LO -122	OG INF	ORMA	ATION 7-91
				C] Emerge	ncy Response	• 🗆 U	Inder	groun	1 Tanks									
								ther	Resol	lices			-			Pag	e 1	of	2
Facili	ty/Projec	t Nam	e E					Lice	ense/P	ermit/M	onitor	ing l	Num	ber	Boring	Numb	er		
Dry	clean		Facili	ry ne and name of	crew chie	ħ		Dat	e Drill	ing Star	ted	Ir	Date	Drillin	g Com	v - i oleted	Drillin	g Met	hod
On-	-Site E	nviroi	nment	al Tony Kap	ougi	•)		Dat	11.	/18/99			Jaio	11/1	.8/99		Soilp	robe	
DNR	Facility	Well N	lo. W	l Unique Well !	40 . Co	ommon Well	Name	Fina	al Stati	c Water	·Leve	i s	Surfa	ce Ele	vation	B	orehole	Diam	leter
										Fee	t			1	Feet			2.0	Inches
Borin	g Locatio	n			N	Fs			Lat	0 ' "	,	I	Local	Grid		n (If ap N	plicable	3)	
State	1/4 o	of	1/4	4 of Section	T	N,R		L	.ong	0'"	,			Fe	et 🗌	S		Feet	
Count	y ukesha						DNR Cou	unty	Code	Civil T Broo	lown/	City/ d	or V	/illage					
Sai	mple					I									Soil	Proper	πies]
	<u> </u>			So	il/Pock	Descriptio	-]
	(i p	unts	Fee	And	Geolog	ic Origin F	n For						_	Ion	0				Its
ber	th (j	S	h In		Each M	aior Unit	01		СS	hic			I	lard	sture	ri d	ii ic	0)/
Mum	eng	Blow	Dept			5			O S	Grap Log	Well		hun	Stan	Moi	Liqu	Plas Lim	P 20	RQI
$\frac{2}{1}$	30			FILL, silt, tr	ace sand a	nd organics,	dark			XX			-						1
				brownish gra	y, dry.					\bigotimes		Y							
			- 1.5	FILL, gravel	and sand,	some silt, br	own, dry							i					
			E-3.0																
			E																
2	48		-4.5	SILT, trace f	ine to coar	se grained sa	ind and	Ĺ	ML										
			E	organics, dar	k brownis	n gray, moist													
			-6.0																
-	40		-/.3 -																
3	48		Ego	CLAY, silty,	brown, m	ioist to dry.													
			E											1					
			⊨10.5																
			F																
4	36		F12.0	(moist)															
·			E									<i></i>							
			-13.5									:							
			F.																
			F 13.0							V////	目								
5	36		E								E	<i>:</i>							
			E									·							
			E-18.0							<i>\/////</i>	日								
I here	by certif	y that I	the info	rmation on this	form is tr	ue and correc	ct to the b	est o	f my k	nowledg	ge.								
Signat	ure							Firm		McLa	iren/	Har	t .						
										Pewaul Tel: 41	kee, V 4-523	-204	onsin 0, 1	Fax: 4	14-523-	2059			
This f	orm is a	uthoriz	ed by C	Chapters 144, 1	47 and 162	2, Wis. Stats.	. Comple	tion	of this	report i	s man	dator	ry. F	Penaltie	s: Fort	eit not	less tha	n \$10	nor
more	than \$5.	000 foi	r each v	notation. Fined	1 not less t	han \$10 or m	ore than 3	\$100	or im	risoned	l not le	ess th	1an 3	0 days	, or bol	in for e	acii vioi	auon.	

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

5.13

1000

ं वें

Borin	g Numb	er	MH	W-1 Use only as an attachment to Form 4	400-122						Pag	e 2	of 2	2
Sar	nple				1	1				Soil	Рторе	rties	1	1
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
nZ 6	a] 42	BI	<u>–</u> 	SILT, gray, moist to wet. CLAY, silty, grayish brown, moist, hard.	⊃ ML CL				Str	ΨŬ			<u>A</u>	<u>X</u> O
				1	1	1	1		1	1		1		

State Depai	of Wisco	onsin f Natur	al Reso	urces [Route To:	aste		Haz '	Waste					SOI: For	L BOR m 4400	ING L(-122)G INF	ORM	ATION 7-91
Doba				ĺ		ncy Respons	se 🗌 t	Under	groun	d Tanks									
				L	⊥ Wastewa	ater		Water Other	Resou	irces						Pag	e 1	of	2
Facili	iry/Proje		e Facilit	rv				Lic	ense/P	ermit/M	lonitor	ing N	umbe	ſ	Boring MHV	, Numb N-2	er		
Borin	g Drilleo	By (F	irm nan	ne and name of	crew chief)		Dat	e Drill	ing Star	ted	D	ate Di	rillin	ig Com	pleted	Drillin	g Me	thod
On	-Site E	nviroi	nmenta	al Tony Kaj	pugi				11	/18/99	1		1	11/1	8/99		Soilp	robe	
DNR	Facility	Well N	io. W	I Unique Well	No. Co	mmon Well	Name	Fin	al Stati	c Water	Level	I Su	irface	Ele	vation	B	orehole	Dian 2 0	neter
Borin	g Locati	on										L	ocal C	Grid I	Locatio	n (If ap	plicabl	e)	
State	Plane	_	• • •		N,	E s	S/C/N		Lat	0.1	,			-		N		.	Ε
Count	1/4 (of	1/4	t of Section	T	N,R	DNR Co	L	Long Code	Civil 1	[own/(City/ (or Vil	lage		3		reet	<u> </u>
Wa	ukesha									Broo	kfield	1							
Sa	mple														Soil	Proper	ties		-
		ıts	teet	So	il/Rock l	Descriptio	on	1						ч					
5	ı (in ered	Cour	In F	And	l Geologi	c Origin	For		s	C.				atio	nre	-	0		tents
umbe	ngth	ow (epth		Each Ma	ajor Unit			sc	aph	ell	D/F	anda	netr	oist	init	astic	200	QD/
ž	ReLe	BI	ă						D		ĭ≷	ā	- IS	Pe	ΣŬ			٩	20
1	10		Ē	brownish gra	, little sand y, dry.	and organi	ics, dark	Γ				Š							
			-1.5	FILL, gravel	and sand,	some silt, b	orown, dry] '.											
			E																
			-3.0																
2	42		-45																
			E						CL										
			-6.0																
			E																
			-7.5																
3	24		E	CLAY, silty,	brown, me	oist to dry.													
			-9.0																
			E 10 5					1											
			E					l											
4	26		-12.0									•							
4	00		E																
			-13.5																
5	36		-						CL										
				CLAY, silty,	, grayish br	rown, moist	, hard.				目								
			-18.0							<i>\/////</i>									
I here	by certif	y that i	the info	rmation on this	form is tru	e and corre	ect to the b	est o	f my k	nowledg	ge.								
Signat	ure							Firm		McLa	ren/I	Hart	-:						
					_					rewaul Tel: 41	kee, w 4-523	-2040	, Fa	x: 41	14-523-	2059			
This f	orm is a	uthoriz	ed by C	hapters 144, 1	47 and 162	, Wis. Stats	. Comple	tion (of this	report i	s mano	latory	Pen	haltie	s: Forf	eit not	less that	n \$10 ation	nor

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

: 3

N. AND

Sample Soil/Rock Description and Geologic Origin For 9 and Geologic Ori	Borin	ig Numb	er	N	ИH	W-2	Use	only as a	an attachi	ment to F	Form 44(00-122						Pag	e 2	of 2	2
and Geologic Origin For Each Major Unit Soil/Rock Description And Geologic Origin For Each Major Unit Soil/Rock Description Soil/Rock Description (11/01d) Image: Soil/Rock Description Soil/Rock Description (11/01d) 6 48 = 19.5 = 24.0 = 19.5 = 24.0 Image: Soil/Rock Description And Geologic Origin For Each Major Unit Soil/Rock Description Soil/Rock Description (11/01d) Image: Soil/Rock Description (11/01d) 6 48 = 19.5 = 24.0 Image: Soil/Rock Description (11/01d) Image: Soil/Rock Description (11/01d)	Sar	mple		Τ													Soil	Proper	ties		
6 48	Number	Length (in) Recovered	Blow Counts		Depth In Feet		Soil/H And Ge Ea	Rock D eologic ch Maj	escript Origin jor Uni	ion 1 For t		USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
	6	48			<u>Q</u> 19.5 21.0 22.5 24.0-	SILT, g	gray, mois	it to wet.				ML			4				_ _ _ _ _ _ _ _ _ _		

State Depar	of Wisco rtment of	onsin f Natur	al Reso	Route	To: lid Waste		Haz.	Waste				SOI For	L BOR m 4400	.ING L0 1-122)G INF	ORM	ATION 7-91
					nergency Respo	nse 🔲	Under	rgroun	d Tanks								
					astewater		Water	Resou	irces					Pag	ve 1	of	2
Facili	ty/Proje	ct Nam	e	<u> </u>	·····		Lic	ense/P	ermit/M	lonitorii	ng Nu	mber	Boring	g Numb	er		
Dry	clean	USA	Facili	ty									MH	W-1	1		
Boring	g Drilled	l By (F nvi r o)	irm nan nment	ne and name of crew al Tony Kapugi	chief)		Dat	e Drill	ing Star	ted	Dat	e Drillir	ig Com	pleted	Drillin	ig Mei	thod
On			mineina	un tony nupugi				11	/18/99			11/1	18/99		Soilp	robe	;
DNR	Facility	Well N	io. W	I Unique Well No.	Common We	ell Name	Fin	al Stat	c Water	r Level	Sur	face Ele	vation	E	orehole	: Dian	neter
Porin	a Locati				-	·····			Fee	t	Loc	al Grid	Feet	n (If ar	nlicabl	$\frac{2.0}{2.0}$	Inches
State	Plane	011			N, E	S/C/N		Lat	0 ' '	•	Loc			N N	pricabi	0)	ΞЕ
	1/4	of	1/4	4 of Section	T N,R		1	ong	0 ' '	'		Fe	et 🗌	S		Feet	□ w
Count	iy Jukesha					DNR Co	ounty	Code	Civil 1	fown/C	ty/ or	Village					
Sai	mple								Dioc				Soi	Prope	rties		
	Ţ.		5	Soil/P	ook Decerint	ion							Γ	1	Γ		1
	g ii)	unts	ı Fe	And Geo	ologic Origin	n For					~	on					its
ıber	gth (over	ς Υ	ih Ir	Eac	h Major Uni	t		CS	hic	ram	'FID	dard	sture	it d	it ic	0)/
Nun	Recc	Blov	Depi					U S	Grap	Well Diag	PID,	Stan	Moi	Liqu	Plas	P 20	Con
1	30			FILL, silt, trace sa	and and organic	s, dark	 r		XX			1					
			-	brownish gray, dr	y.												
			- 1.5	FILL, gravel and	sand, some silt,	brown, dry	y .										
			E_3.0														
			Ē														
2	48		-4.5	SILT, trace fine to	coarse grained	sand and	Г	ML									
				Organics, dark bro	whish gray, mo	01St.]										
			-6.0 E										}]			
			-														
3	48		-7. 3	CIAX silms have													
5			- 9.0	CLAI, Silly, brow	n, moist to dry												
1																	
			-10.5														
									<i>V/////</i>								
4	36		-12.0	(moist)													
			-														
			E 13.3														
			E-15.0														
			E														
5	36		-16.5														
			-18.0				-		<i>\/////</i>			<u> </u>					
I heret	by certif	y that t	he info	rmation on this form	is true and corr	rect to the b	Firm	f my k	nowledg	;e							
Jighat								L.	McLa Pewaul	iren/H kee, Wi	art sconsi	n					
									Tel: 41	4-523-2	040,	Fax: 4	14-523-	2059			
This fo	orm is au han \$5 (uthoriz 300 for	ed by C · each v	Chapters 144, 147 and iolation. Fined not I	d 162, Wis. Star ess than \$10 or	ts. Comple	etion (\$100	of this or imr	report is risoned	s manda not les:	tory.	Penaltie 30 days	s: Forf	eit not h for e	less that ach viol	n \$10 lation.	nor

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

12×12/01

Borin	g Numb	er	MH	W-1 Use only as an attachment to Form 44	00-122						Pag	e 2	of 2	2
Sar	nple									Soil	Proper	ties	1	
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
6	42		-19.5	SILT, gray, moist to wet. CLAY, silty, grayish brown, moist, hard.	ML CL									

State o Depar	of Wisco tment of	nsin Natur	al Reso	urces [Route To:	aste	ΠH	Iaz. '	Waste				SOI For	L BOR m 4400	ING L(-122)G INF	ORMA	ATION 7-91
				[[ncy Respon	ise 🗌 t	Inder	rgroun	d Tanks								
				L.	- Wastewa	ater		ther	Resol	nces					Pag	;e 1	of 2	2
Facilit	y/Projec	t Nam	e Facili	-,				Lic	ense/P	ermit/M	lonitori	ng Nur	nber	Boring	Numb	er		
Boring	z Drilled	By (F	irm nan	.y ne and name of	crew chief)		Dat	e Drill	ing Star	ted	Date	Drillir	ig Com	pleted	Drillin	g Metl	hod
On-	Site E	nviro	nment	al Tony Kap	pugi				11.	/18/99)		11/1	18/99		Soilp	robe	
DNR	Facility	Well N	io. W	(Unique Well)	No. Co	mmon Wel	l Name	Fin	al Stati	c Wate	r Level	Sur	face Ele	vation	B	orehole	Diam	eter Inches
Boring	z Locatio)n						<u> </u>			,	Loc	al Grid	Locatio	n (If ap	plicable	2.0 i e)	
State	Plane		• • •		N,	E :	S/C/N		Lat	0	•		-		N]	E
Count	1/4 0	of	1/4	of Section	Т	<u>N,R</u>	DNR Co	I I	Long	Civil	Fown/C	ity/ or	Fe Village	et 🛄	<u>s</u>		Feet L	
Wa	, ukesha						Diffeed		0040	Broc	kfield		· muge					
Sar	nple													Soil	Proper	rties		-
		Its	eet	So	il/Rock l	Descripti	on						_					
L	(in) sred	Cour	In F	And	l Geologi	c Origin	For		S	.	E	Q	ation	er fe				ents
Jumbe	ength	llow C	Jepth		Each Ma	ajor Unit			JSC	jraphi og	Vell Diagra	ID/F	tanda	Aoistu	iquid	lastic	200	QD/ Comm
1	18	<u> </u>	- -	FILL, gravel	, little sand	and organ	ics, dark	ſ					NH	20			, <u>114</u>	
			-1.5	FILL gravel	and sand	some silt	orown dry											
			-	1 122, 514, 01	und sund,	some sitt, i	orown, dry	•										
			-3.0															
2	42		Ē															
2	72		-4.5 -															
			-60						CL									
			-7.5															
3	24			CLAY, silty,	brown, me	oist to dry.												
			-9.0 -															
			F 10.3															
	•		- 12.0															
4	36																	
			-13.5															
			-15.0															
5	36		-						CL									
			- 10.5	CLAY, silty,	grayish br	own, moisi	, hard.											
			- 							<i>\/////</i>	目							
I heret	by certif	y that (he info	rmation on this	form is tru	e and corre	ect to the b	est o	f my k	nowledg	ge.	L		£				
Signat	ure							Firm	I	McLa	aren/H	lart						
										Pewaul Tel: 41	kee, Wi 4-523-1	sconsii 2040,	n Fax: 4	14-523-	2059			
This fo	orm is au	ıthoriz	ed by C	hapters 144, 14	47 and 162	, Wis. Stat	s. Complet	tion o	of this	report i	s mand:	atory.	Penaltie	es: Forf	eit not	less thai	n \$10 ı	nor
more t Each d	han \$5,(lay of co	000 for ontinue	each v d violat	iolation. Fined	i not less th te offense,	an \$10 or i pursuant to	more than 5 ss 144.99	5100 and	or imp 162.06	visoned	l not les Stats.	s than	30 days	, or boi	n for e	ach viol	ation.	

Antonia

= ...q

Borin	g Numb	er	MH	IW-2 Use only as an attachment to Form 44	00-122	•					Pag	e 2	of 2	2
Sar	nple									Soil	Proper	rties		
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
6 Number	A8 Length Recove	Blow C		SILT, gray, moist to wet.	ML	Graphic		PID/FI	Standar Penetra	Moistur	Liquid	Plastic Limit	P 200	RQD/ Comme



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary Gloria L. McCutcheon, Regional Director Southeast Region Annex 4041 N. Richards Street, Box 12436 Milwaukee, Wisconsin 53212-0436 TELEPHONE 414-229-0800 FAX 414-229-0810

March 3, 1999

Robert Miller Spic & Span, Inc. 4301 North Richards Street Milwaukee, WI 53212

SUBJECT: Case closure request, Dry Clean USA, 17680 West Bluemound Road, file reference FID #268252050 ERR-ERP

Dear Mr. Miller:

Thank you for submitting the report by STS, Inc. concerning the monitoring well on the property. The report shows that the depth to groundwater is probably only about 10 or 11 feet. Therefore, closure at this site is not appropriate without additional groundwater investigation to confirm the groundwater flow direction and that groundwater has not been impacted.

Two additional wells or geoprobe monitoring wells should be completed at the site. One well should be outside the building very close to the dry cleaning machine. The results of this work should help determine if fate and transport modeling is needed or appropriate.

If you have any questions about this letter, call me at 414-229-0850.

Sincerely, John Feenev Hydrogeologist

cc: McLaren/Hart SER File



NO. 0657 P. 1/2



ENVIRONMENTAL ENGINEERING CORPORATION

TO: John Feeney

COMPANY: Wisconsin Department of Natural Resources

RE: Dryclean USA FID #268252050 ERP

DATE: 2/8/99

FROM: Brian Schneider

Milwaukee Office W239 N2890 Pewaukee Road Unit #D Pewaukee, WI 53072 (414) 523-2040 - ph. (414) 523-2059 - fax

Pages (including header): 1

VIA FAX 229-0810

John,

uf to 140

I am writing to request your approval of the PCE soil concentrations we propose to use for the SESOIL model for the referenced site. The concentrations are as follows:

Soil Type	Soil Depth	Geometric Me	an Concentration	575 1 1 1100
Gravel	0-3.5 ft.	200 ug/kg	(Based on actual data)	1 +14 2, 3 had the,
Clay	3.5-7 ft.	89 ug/kg 🗸	(Based on actual data)	2100 ppb
Clay	7-9 ft.	23 ug/kg	(Estimated based on site dat	(a) 1200 2 (c) 1
Clay	9-11.5	0 ug/kg	(Estimated based on site dat	a)

The area for which the geometric mean concentrations were calculated encompasses only the soil borings in which PCE was detected, and includes both the McLaren/Hart and STS data. The mean concentrations for the gravel layer and the uppermost clay layer are based on actual data. The concentrations for the lower two layers are estimated based on the following site data:

- the mean concentrations based on actual site data decrease with depth;
- the stiffness of the clay prevented boring below 6 to 7 feet below ground surface using a power hammer and jack, indicating the clay would also serve as an effective migration barrier:
- PCE and breakdown products were not detected in the soil sample collected from below the water table in the soil boring for MW-1 installed by STS. PCE and breakdown products were also not detected in the groundwater sample collected from monitoring well MW-1. This well is estimated to be downgradient of the PCE source. A site figure is attached indicating the soil boring locations, sample depths and PCE concentrations, and the proposed area for modeling.

I will call you to discuss this information.

lostimated gu flow direction, only i well

Thank you.

From the desk of :

Brian W. Schneider McLaren/Hart (414) 523-2040



האני מנאטנא

ما و العمل المراجع المعموم و العمر المراجع . ما و العمل المراجع المعموم و العمل المراجع . الما و المراجع المراجع المراجع .



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary Gloria L. McCutcheon, Regional Director Southeast Region Annex 4041 N. Richards Street, Box 12436 Milwaukee, Wisconsin 53212-0436 TELEPHONE 414-229-0800 FAX 414-229-0810

December 30, 1998

Robert Miller Spic & Span, Inc. 4301 North Richards St. Milwuakee, WI 53212

SUBJECT: Case closure request, Dry Clean USA, 17680 W. Bluemound Road, file reference FID #268252050 ERP

Dear Mr. Miller:

I have reviewed your case based on the report submitted by your consultant, McLaren Hart, Inc. I am not able to close the case at this time. Please have your consultant submit documents pertaining to the investigation conducted by STS, Inc., as referenced to by McLaren Hart, Inc. We will reconsider the case for closure at that time.

It will be necessary to put a restriction on the deed of the property making it a requirement to maintain a paved surface (cap) on the property as a condition of closure. Alternately, you may have your consultant determine a site-specific groundwater based cleanup goal (with no cap on the site). If that number is above concentrations found, a deed restriction will not be needed.

If you have any questions about this letter, call me at 414-229-0850.

Sincerely. John Feeney

John Feeney Hydrogeologist

cc: McLaren Hart, Inc. SER File







August 6, 1998

Mr. Michael Farley Wisconsin Department of Natural Resources P.O. Box 12436 Milwaukee, WI 53212

Re: FID #268252050 ERR/ERP Dryclean USA 17680 West Bluemound Road, Milwaukee Site Investigation Report

Dear Mr. Farley:

Enclosed are two copies of the Site Investigation Report for the Dryclean USA property referenced above. The report was prepared in accordance with applicable sections of Wis. Adm. Code chs. NR 716.15. Based on the results of the investigation, McLaren/Hart recommends closure of the site. Feel free to contact either Brian Schneider or George Bayer if you have any questions or require additional information.

Sincerely,

McLAREN/HART ENVIRONMENTAL ENGINEERING CORPORATION

Rick Smith

Rick Smith Principal Environmental Scientist Office Manager

Brian Schneider, P.E. Senior Engineer

George & Bayer

George J. Bayer Associate Geoscientist

O: COMMON dryusa.wpd

cc: Mark Thimke, Esq. — Foley & Lardner Mr. Robert Miller — Spic and Span, Inc. Mr. John Fennimore — The RREEF Funds



SITE INVESTIGATION REPORT

DRYCLEAN USA BROWNSTONES CENTER 17680 WEST BLUEMOUND ROAD BROOKFIELD, WISCONSIN FID #: 268252050 ERR/ERP

Prepared for:

Mr. Robert Miller Spic and Span, Inc. 4301 North Richards Street Milwaukee, WI 53212

Prepared by:

McLaren/Hart Environmental Engineering Corporation W239 N2890 Pewaukee Road Pewaukee, Wisconsin 53072

August 6, 1998

TABLE OF CONTENTS

CERTIFICATION - PROFESSIONAL ENGINEER i
1.0 INTRODUCTION
1.1 SITE LOCATION
1.2 BACKGROUND
1.3 PROPERTY OWNERSHIP
1.4 CONSULTANTS AND CONTRACTORS
2.0 SITE PHYSIOGRAPHY, GEOLOGY AND HYDROGEOLOGY
2.1 TOPOGRAPHY AND SURFACE WATER DRAINAGE
2.2 SOILS AND GEOLOGY
3.0 SITE INVESTIGATION ACTIVITIES
3.1 PROJECT SCOPING DATA
3.2 SITE PHYSIOGRAPHY/SAMPLING STRATEGY
3.3 FIELD INVESTIGATION METHODS
3.3.1 Soil Sample Collection and Handling
3.3.2 Decontamination Procedures
3.3.3 Laboratory Analysis
3.4 QUALITY ASSURANCE/QUALITY CONTROL METHODS
3.5 FIELD DOCUMENTATION
3.6 SITE HEALTH AND SAFETY
3.7 INVESTIGATION SCOPE OF WORK
3.8 VARIATIONS FROM WORK PLAN
3.9 RESULTS
3.9.1 Soil Sampling
3.9.2 Groundwater
4.0 RISK ASSESSMENT
5.0 SUMMARY AND RECOMMENDATIONS

TABLE OF CONTENTS (CONTINUED)

ATTACHMENTS

Attachment A	Figure 1	Site Location
	Figure 2	Site Plan
	Figure 3	Soil Analytical Results
Attachment B	Table 1	Soil Samples Laboratory Analytical Results
	Table 2	WDNR Direct Contact Risk Model
Attachment C	Field Meth	odologies
Attachment D	Laboratory	Analytical Reports and Chain-of-Custody Documents
Attachment E	Soil Boring	y Logs

SITE INVESTIGATION REPORT

DRYCLEAN USA BROWNSTONES CENTER 17680 WEST BLUEMOUND ROAD BROOKFIELD, WISCONSIN FID #: 268252050

August 6, 1998

CERTIFICATION - PROFESSIONAL ENGINEER

I, Brian W. Schneider, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

REPORT:

ATTACHMENTS:

Α	Figures	3 pages
В	Tables	3 pages
С	Field Methodologies	3 pages
D	Laboratory Analytical Reports/Chain-of-Custody Documents	32 pages
E	Soil Boring Logs/Abandonment Forms/Well Construction Logs	16 pages

Senior Engineer

8/6/98

10 pages

Date



Dryclean USA. Site Investigation Report O: COMMON dryusa.wpd

1.0 INTRODUCTION

1.1 SITE LOCATION

The Property is located in the NW 1/4 of the SE1/4 of Section 28, Township 7 North, Range 20 East. The address is 17680-C West Bluemound Road in Brookfield Wisconsin. The site location is shown in Figure 1, Attachment A.

1.2 BACKGROUND

Dryclean USA is a subsidiary of Spic and Span, Inc. and the Dryclean USA facility is leased from the RREEF Funds, the property owner. The Brownstone Shopping Center was constructed in 1988 and 1989. Dryclean USA has occupied the center since 1989. Dry cleaning operations are conducted on the premises. The dry cleaning machine was placed in a containment structure in 1995.

On December 12, 1996, STS Consultants (STS) performed two hand auger borings (HA-2 to HA-3) adjacent to the dry cleaning machine. Soil samples were collected from the fill soils one to two feet below ground surface (bgs). The samples were analyzed for chlorinated volatile organic compounds (CVOCs) using EPA Method 8240. Samples contained concentrations of 1,200 and 2,100 micrograms per kilogram (μ g/kg) of tetrachloroethylene (PCE). No other CVOCs were detected.

On the same date, STS also installed an exterior hand auger boring (HA-1) approximately 50 feet northwest of the dry cleaning machine, and an exterior monitoring well approximately 75 feet north of the dry cleaning machine. Samples were collected from 1 to 2 feet bgs in HA-1, and 5 to 7 and 9 to 11 feet bgs in MW-1. Clay soils were encountered from a depth of 5 feet bgs to the end of the boring at 17.5 feet bgs in the soil boring for MW-1. Field screening did not indicate the presence of VOCs and CVOCs were not detected in the laboratory analyses of samples collected from these borings. In addition, no VOCs were detected from a groundwater sample obtained from the monitoring well by STS.

1.3 PROPERTY OWNERSHIP

The Property is owned by:

The RREEF Funds 250 East Wisconsin Avenue Milwaukee, WI 53202 Attention: Mr. John Fennimore (414) 289-0305

The responsible party for the site investigation is:

Spic and Span, Inc. 4301 North Richards Street Milwaukee, WI 53212 Attention: Mr. Robert Miller (414) 964-5050

1.4 CONSULTANTS AND CONTRACTORS

The site investigation activities reported herein were performed by:

McLaren/Hart Environmental Engineering Corporation W239 N2890 Pewaukee Road, Unit D Pewaukee, WI 53072 (414) 523-2040 - phone (414) 523-2059 - fax

As part of the investigation, the following service/commodity providers also conducted activities associated with the Property investigation:

Soil Probe Services

On-Site Environmental Services, Inc. P.O. Box 280 Sun Prairie, WI 53590 (608) 837-8992

Laboratory Analytical Services

En Chem, Inc. 1795 Industrial Drive Green Bay, WI 54302 (920) 469-2436

2.0 SITE PHYSIOGRAPHY, GEOLOGY AND HYDROGEOLOGY

2.1 TOPOGRAPHY AND SURFACE WATER DRAINAGE

- <u>Site Topography</u>. Based on the United States Geological Survey (USGS), Waukesha, Wisconsin, 7.5 minute topographic map (1994), the topography in the immediate vicinity of the site slopes downward to the north from the site.
- <u>Surface Water Drainage</u>. Storm water along the site is anticipated to generally drain northward along the curb side drainage associated with the parking lot of the retail mall in which Dryclean USA is located. The curb side drainage discharges to the storm sewer system. Storm water impacting the roof of the building is conveyed by roof drains to the storm sewer as well.

2.2 SOILS AND GEOLOGY/HYDROGEOLOGY

• <u>Site Geology/Hydrogeology</u>. The surface soils in the area of the site have been classified by the U.S. Department of Agriculture, Soil Conservation Service (1971). The general soil association is the Hochheim-Theresa Association with site-specific soils consisting of Mequon Silt Loam, Ozaukee Silt Loam, and Ashkum Silty Clay Loam Series. The general soil association is described as well-drained soils with a subsoil of clay that formed in areas of thin loess and glacial till on moraines.

The glacial till deposits in the area of the subject property vary between 100 to 200 feet thick and consist of unsorted, unstratified, unconsolidated mixtures of clay, silt, sand, pebbles, cobbles and boulders. Drilling logs provided by the Wisconsin Geological and Natural History Survey for soil borings performed in the vicinity of the site indicate the clay soils extend to a depth of at least 120 feet bgs. The glacial till overlies the Niagara Dolomite bedrock which is up to 450 feet thick. The glacial deposits, as well as the bedrock, are considered to be groundwater aquifers. The bedrock aquifer supplies potable water to municipal and residential wells in Waukesha County. High usage of the aquifer has resulted in a depressed bedrock water table at an elevation of about 550 feet mean sea level (or about 300 feet bgs). Groundwater occurring in the glacial aquifer is hydraulically connected to the bedrock aquifer.

Soils consisting of silty clay with a trace of sand were observed beneath fill soils observed on-site. Fill soils were observed from one to four feet below ground surface and generally consisted of sand and/or crushed stone. No groundwater was observed in borings performed by McLaren/Hart during this investigation.

3.0 SITE INVESTIGATION ACTIVITIES

The site investigation scope of work was developed in response to data gaps from the previous investigation. Additional tasks were added to the scope of work as the need for additional data was identified. The additional tasks are specified in the following sections.

3.1 PROJECT SCOPING DATA

To the extent practical, the scope of the project was defined in consideration of the criteria listed in NR 716.07, as detailed below. The data were updated during the investigation, as appropriate:

- <u>Site Use</u>. The Dryclean USA facility is located in the Brownstones Shopping Center and has operated as a dry cleaning facility at this location since 1989.
- <u>Type and Amount of Impact</u>. Based on investigations performed prior to the McLaren/Hart investigation, soils in the immediate vicinity of the dry cleaning machine are impacted with PCE. Two samples collected from 1 to 2 feet bgs adjacent to the machine by STS Consultants contained concentrations of 1,200 and 2,100 ug/kg PCE.
- <u>Environmental Media Potentially Affected</u>. PCE impacts are thought to be predominately within the coarse fill materials underlying the Dryclean USA space.
- <u>Need for Access Permission</u>. The RREEF Funds owns the property on which the impact was found and has granted conditional access to conduct the investigation. Based on prior investigation findings, impact is believed to be limited to coarse materials beneath the floor slab of the Dryclean USA facility. Based on existing data, no off-site contamination is suspected. No off-site investigation is planned.
- <u>Potential Receptors</u>. No groundwater impacts have been identified at the site. Potential migration pathways include lateral migration along utility lines and along the coarse materials located beneath the buildings concrete floor slab. The City of Brookfield supplies potable water to the site and surrounding sites. Based on City of Brookfield records, there are no wells in the vicinity of the site.
- <u>Significant Resources</u>. Based on existing data, the site has not affected and does not present a threat to any threatened or endangered species, sensitive habitats, wetlands, resource waters, or historical or archeological sites.
- <u>Immediate or Interim Actions</u>: None have been conducted or are proposed.

The additional information needed to determine an appropriate remedial response includes, the lateral and vertical boundaries of affected soil in the vicinity of the dry cleaning machine and other data needed to determine a site-specific cleanup approach.

3.2 SITE PHYSIOGRAPHY/SAMPLING STRATEGY

The sampling strategy was developed to identify the boundaries of soil impact, based on the known site conditions and characteristics. The sampling locations were selected based on data obtained from prior investigations and site characteristics.

3.3 FIELD INVESTIGATION METHODS

3.3.1 Soil Sample Collection and Handling

Soil sampling was performed using either portable power, hand augering, or soil probe equipment. Upon collection, the soil was classified with respect to USGS classification, color, moisture content, evidence of impact (discoloration and odor) and other observations. When practical, ASTM methods D-2487 and D-2488 were utilized. The information was recorded in a bound field notebook used to record daily activities.

As soon as possible following sample collection, the soil samples for the laboratory analysis were transferred to appropriate laboratory-provided containers. A fresh pair of latex (or similar) gloves will be used during the handling of each sample to minimize the potential for cross contamination. The samples were containerized in laboratory-provided 60-ml glass jars with Teflon[®] septa. Twenty-five to 35 grams of soil was placed in the jars and each sample was preserved in the field with laboratory-provided purge-and-trap grade methanol.

The sample jars were labeled with the sample location identification, depth of sample, date of sample collection and intended analysis. The sample jars were placed in resealable plastic bags and packed in an iced, insulated container. A chain-of-custody form was completed each day, and accompanied each container of samples from the site to the laboratory. Samples were transported from the facility to the laboratory via overnight courier.

3.3.2 Decontamination Procedures

Soil sampling equipment was decontaminated before each boring location using an Alconox or TSP solution and rinsed in clean water (distilled, deionized or municipal potable). Any sampling tools (i.e., spoons, knives, spatulas, etc.) were also be cleaned in a solution of Alconox or TSP solution and rinsed in clean water prior to collection of each sample. A clean pair of latex, or equivalent, gloves was used during each sample to minimize the potential for cross-contamination.

3.3.3 Laboratory Analysis

Laboratory analyses were performed by En Chem, Inc. using Wisconsin-modified U.S. EPA SW-846 Method 8260, target list compounds: PCE 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), trans-1,2-dichloroethene, 1,1,2-trichloroethane, 1,1-dichlorethane, 1,2-dichloroethane, and vinyl chloride. The target list is

defined to identify the PCE used at the facility, its potential breakdown products and related compounds.

3.4 QUALITY ASSURANCE/QUALITY CONTROL METHODS

The following quality assurance/quality control measures were implemented during the site investigation activities:

- Decontamination procedures and measures to minimize the potential for crosscontamination of samples were followed as specified in section 2.3.2.
- All site activities were recorded in a bound field notebook (see Field Documentation section below).
- Chain-of-custody procedures were followed as specified in Attachment D.

A methanol blank was included in each cooler shipped to the laboratory. The samples were shipped on ice; therefore, no temperature blanks were required.

3.5 FIELD DOCUMENTATION

All site activities were documented in a bound field notebook. Included in the daily documentation are:

- Procedures for sampling and other routine activities associated with the site investigation.
- Field observations.
- Chronological log of site activities.

3.6 SITE HEALTH AND SAFETY

The protection of site personnel and the general public is a primary concern. All reasonable measures were taken to protect the health and safety of the personnel and general public. A site Health and Safety Plan that meets or exceeds the standards found in 29 CFR 1910.120 was prepared and followed during site activities. All project personnel and subcontracted personnel were trained in hazardous materials handling and have appropriate on-site training and experience.

Detailed methodologies for each of these tasks is provided in Attachment D. Additional information is presented in the following sections.

3.7 INVESTIGATION SCOPE OF WORK

The site investigation activities, as presented in the April 22, 1997 Work Plan and the July 22, 1997 Work Plan Addendum, were implemented on April 30, 1997, January 10 and January 31, 1998. The scope of work included:

- Sample 18 soil borings to various depths (six to nine feet) below ground surface.
- Collect up to two soil samples from each boring for laboratory analysis of selected VOCs. The samples were collected from various depths.

The specific objectives of each sampling location are presented in the April 22, 1997 Work Plan and the July 22, 1997 Work Plan Addendum.

3.8 VARIATIONS FROM WORK PLAN

The following tasks were altered or added to the original work plan in response to field conditions and data needs:

- Borings SB-9 and SB-10 could not be completed due to adverse subsurface conditions (maximum soil probe depth-two feet bgs) and equipment limitations.
- Only one soil sample was submitted for laboratory analysis from boring SB-18 due to adverse subsurface conditions (maximum soil boring depth-four feet bgs).

3.9 RESULTS

The boring locations are shown in Figures 2 and the analytical results are summarized in Table 1. Figure 3 presents soil analytical results. Laboratory reports, quality control data and chain of custody documents are provided in Attachment D. Soil boring logs are provided in Attachment E.

3.9.1 Soil Sampling

One to two soil samples were collected from each of the 16 soil borings installed at the site. The samples were submitted for laboratory analysis of select VOCs. The soil sampling analytical results are detailed in Table 1. Tetrachloroethene (PCE) was the only VOC detected. PCE was detected in eight of the sixteen borings (SB-1 through SB-6, SB-8, and SB-18) at concentrations as high as $290 \mu g/kg$.

PCE impacted soil was generally confined to the soil borings located within a 25 foot radius of the dry cleaning machine. PCE was not detected in any of the borings installed outside the building. The highest PCE concentrations were detected in the fill soils immediately beneath the interior concrete slab (SB-5 and SB-18). PCE concentrations decreased with depth in the natural clay soils. In samples collected from clay soils approximately five feet bgs in SB-1 and SB-2 (performed adjacent to the dry cleaning machine and just below the

depth of STS borings HA-2 and HA-3) PCE concentrations were 180 and 140 μ g/kg, respectively. These concentrations were approximately one-tenth of the concentrations observed in the samples collected from the overlying fill material in HA-2 and HA-3 which were 1,200 and 2,100 μ g/kg. respectfully.

3.9.2 Groundwater

Groundwater was not observed in any of the soil borings installed by McLaren/Hart.
4.0 RISK ASSESSMENT

Based on the results of the investigation, the PCE is confined to a small volume of fill soils beneath the interior concrete slab. Soil boring logs from this investigation and previous investigations performed by STS indicate the underlying clay soils extend to a depth to at least 20 feet bgs, and drilling records from the vicinity of the site indicate the clay soils extend to a depth of at least 120 feet bgs.

Groundwater was not observed in any of the borings within the impacted soil area. VOCs were not detected in the water sample from MW-1. The soils are confined beneath a concrete floor slab and above tight clay soils. Given the location of the site along the commercial corridor of Bluemound Road, it is reasonable to assume that an impermeable concrete surface will be a permanent feature of this site. The clay soils observed beneath the impacted soils are estimated to have a hydraulic conductivity of 1×10^{-7} cm/sec and extend to a depth of at least 120 feet bgs. There is no record of potable water wells on or in the vicinity of the site, and water in the area is supplied by the City of Brookfield. Based on this, the potential risk to human health through ingestion of groundwater would be minimal to non-existent.

The WDNR Direct Contact Risk Model was used to evaluate the excess cancer risk attributable to contact with PCE through ingestion of soil particles, inhalation of soil particles and inhalation of PCE vapors. The results of the model indicate that PCE concentrations in the soil as high as 8.5 mg/kg would not exceed the acceptable cancer risk of 1.0×10^{-6} . The highest concentration of PCE observed on site was 2.1 mg/kg. Currently, the soils are confined beneath the concrete floor of the building and the direct contact risk is not present. However, if in the future the building were to be demolished and the soils disturbed, the potential risk to human health through direct contact with the soil would be minimal to non-existent. The WDNR Direct Contact Risk Model is shown in Table 2.

575 Samples

5.0 SUMMARY AND RECOMMENDATIONS

A site investigation was performed at Dryclean U.S.A. site, 17680 West Bluemound Road, Milwaukee, Wisconsin. The investigation was conducted to assess the magnitude and extent of PCE detected in the soils during previous investigation activities. The investigation activities were conducted on April 30, 1997, January 10, 1998 and January 31, 1998. The scope of work included collection and analysis of 28 soil samples from 16 soil boring locations for chlorinated volatile organic compounds.

PCE affected soils are limited in magnitude and extent and no evidence of groundwater impact was observed. Potential migration of the PCE is limited by the concrete surface and the native low conductivity clay soils. There is no record of potable water wells on or in the vicinity of the site, and water in the area is supplied by the City of Brookfield. Based on this, the potential risk to human health through ingestion of groundwater is minimal to non-existent. The potential for direct contact with the soils would only arise in the event of an excavation, and the health risk to the excavation

workers associated with the soil would be minimal to non-existent. Based on this information, closure of this case is recommended.







L ć

Table 1 SOIL ANALYTICAL RESULTS Dryclean USA Facility 17680 West Bluemound Road Brookfield, Wisconsin

Samples analyzed for Volatile Organic Compounds-special list (VOCs (Method 8260)).

Concentrations in Micrograms per Kilogram

			<u></u>			Dryclean	USA and	adjacient	Facilities							
	Sample Identification	SB-1	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5	SB-6	SB-6	SB-7	SB-8	SB-8		······
	Depth (ft)	4-6	5-7	3-5	5-7	2-4	5-7	2-4	4-6	2-4	4-6	2-4	4-5	5-7		
	Date Collected	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97	4/30/97		
ANALYTES:	1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	Tetrachloroethene	180	140	65	51	47	140 (230	220	56	35	ND	87	32		
	Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
					49-14-14-14-14-14-14-14-14-14-14-14-14-14-											
	Sample Identification	SB-11	SB-11	SB-12	SB-12	SB-13	SB-13	SB-14	SB-14	SB-15	SB-15	SB-16	SB-16	SB-17	SB-17	SB-18
	Depth (ft)	3-4	5-6	3-4	5-7	3-4	5-7	2-4	6-8	2-4	6-8	2-4	5-7	2-4	6-8	3-4
	Date Collected	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/10/98	1/31/98	1/31/98	1/10/98	1/10/98	1/31/98
ANALYTES:	1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	290
÷	Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Only positive detection (i.e., > practical quantitation limit) shown.

ND: Not detected above practical quantitation limit.

TABLE 2 WDNR DIRECT CONTACT RISK MODEL SOIL CLEAN-UP GOALS

COMPOUND: PCE

PROJECT NAME: Dryclean U.S.A.

SITE SPECIFIC PROPERTIES:

CONTAMINANT CONCENTRATION	C _{CHEM} =	8.5 mg/kg
WIDTH OF CONTAMINATED AREA	LS=	15 m
AREA OF CONTAMINATED SOIL	A=	175 m ²
ORGANIC CARBON CONTENT OF SOIL	OC=	0.0038 fraction
SOIL PARTICLE DENSITY	P _s =	2.6 g/cm³
SOIL POROSITY	E=	0.45 unitless

CHEMICAL SPECIFIC PROPERTIES

ORAL CANCER SLOPE FACTOR (FROM RISK-BASED CONC. TABLE BA	ACKGROUND INFOR	RMATION)	
	SF _{O-CHEM} =	0.052 [(mg/kg-day)] ⁻¹	
INHALATION CANCER SLOPE FACTOR (FROM RISK-BASED CONC. TA	BLE BACKGROUND	INFORMATION)	
	SF _{i-CHEM} =	0.00203 [(mg/kg-day)] ⁻¹	
MOLECULAR DIFFUSIVITY OR AIR DIFFUSION COEFFICIENT	D _{i-CHEM} =	0.0861 cm ² /sec	
	H	o ot 40 atm-m ³ /mol	
HENRY'S LAW CONSTANT	CHEM-	0.0149	
		37	
ORGANIC CARBON PARTITION COEFFICIENT	К _{ос-снем} =	324 cm ⁻ /gm	

DNR DEFAULT EXPOSURE ASSUMPTIONS PER NR 720.19(5)(c)2.a.

INGESTION RATE OF SOIL AGE 1-6	IR _{SOILAGE 1-6} =	200	mg/day
INGESTION RATE OF SOIL AGE 7-31	IR _{SOILAGE 7-31} =	100	mg/day
DAILY INHALATION RATE	IR _{AIR} =	20	m ³ /day
AVERAGE BODY WEIGHT AGE 1-6	BW _{AGE 1-6} =	15	kg
AVERAGE BODY WEIGHT AGE 7-31	BW _{AGE 7-31} =	70.	kg
EXPOSURE DURATION DURING AGES 1-6	ED _{AGE 1-6} =	6	yr
EXPOSURE DURATION DURING AGES 7-31	ED _{AGE 7-31} =	24	yr
EXPOSURE DURATION FOR INHALATION OF PARTICULATES	ED _{INHALATION} =	30	yr
EXPOSURE FREQUENCY	EF=	350	days/year
AVERAGING TIME	AT=	70	yr

CONTINUED ON FOLLOWING PAGE

EXCESS CANCER RISK DUE TO INGESTION OF SOIL (NON-INDUSTRIAL)

AGE ADJUSTED SOIL INGESTION FACTOR	IF _{SOIL/ADJ} =	114.29	mg-yr/kg-day
CANCER RISK FROM INGESTION OF CONTAMINATED SOIL	RISK _{ING-CHEM} =	6.92E-07	unitless

EXCESS CANCER RISK DUE TO INHALATION OF PARTICLES

RISK FROM INHALATION OF CONT. SOIL PARTICULATES	RISK	NHP-CHEM	1.08E-13 unitless
PARTICULATE EMISSION FACTOR	PEF=	1.88E+10) m³/kg
FUNCTION DEPENDENT ON Um/Ut	F(x)=	0.0497	unitless
EQUIVALENT THRESHOLD VALUE OF WIND SPEED AT 10 M	Ut=	12.8	m/sec
MEAN ANNUAL WIND SPEED	Um=	4.5	m/sec
FRACTION OF VEGETATIVE COVER	G=	0.05	unitless
RESPIRABLE FRACTION	RF=	0.036	g/m²-hr
DIFFUSION HEIGHT	DH=	2	m
WIND SPEED IN MIXING ZONE	V=	2.25	m/sec

EXCESS CANCER RISK DUE TO INHALATION OF VAPORS

UNIT CONVERSION - AREA OF CONTAMINATED SOIL	A _{CM} =	1750000 cm²
EXPOSURE INTERVAL	T=	7.90E+08 sec
SOIL-WATER PARTITION COEFFICIENT	K _{d-CHEM} =	1.2312 cm³/g
SOIL-AIR PARTITION COEFFICIENT	K _{as-CHEM} =	0.496183 g/cm ³
EFFECTIVE DIFFUSIVITY	D _{ei-CHEM} =	0.066155 cm²/g
CHEMICAL ALPHA VALUE	P _{CHEM} =	0.008935 cm ² /sec
SOIL TO AIR VOLATILIZATION FACTOR	VF _{CHEM} =	6146.558 m ³ /kg
CANCER RISK DUE TO INHALATION OF VAPORS	RISK _{INHV-CHEM} =	3.3E-07 unitless

EXCESS CANCER RISK DUE TO CHEMICAL CONTAMINATED SOIL

RISK_{CHEM}= 1.02E-06 unitless

References

- 1.) Smith, R.L. October, 1995. "EPA Region III Risk-Based Concentration Table Background Information."
- 2.) U.S. EPA 1991. Risk Assessment Guidance for Superfund Volume 1: Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals).

SOIL SAMPLE LOGGING, COLLECTION AND HANDLING

Following retrieval of the soil sample from the sampling device, a section of sample intended for laboratory analysis was contained. A portion of the sample was immediately transferred to laboratory-provided containers, field preserved (if appropriate), labeled, placed in a plastic bag, sealed and stored in an insulated container pending shipment to the laboratory.

The remaining sample was classified in accordance with ASTM method D-2487, with reference to method D-2488 (as appropriate). The descriptions may include information pertaining to soil type (Unified Soil Classification System code), grain size distribution, gradation, color (Munsell notation or other), odor, moisture content, consistency, grain shape, lithology and other content, structure, mottling and layering, as appropriate. Upon completion of classification, this portion of the sample was contained in a sealed plastic bag pending field screening, or was deposited in an appropriate container pending disposal.

The samples to be analyzed in the laboratory for volatile organic compounds (VOCs; SW-846 Method 8260) were transferred to laboratory-provided 60-ml glass jars with Teflon[®] septa. Twenty-five to 35 grams of soil was placed in the jars and preserved in the field with laboratory-provided purge-and-trap grade methanol. The jars were then securely sealed, labeled with the sample identification, date of collection and intended analysis. The selected sample containers were then placed in resealable plastic bags and stored on ice in an insulated container.

The samples were transported to a Wisconsin-certified laboratory via overnight courier or the laboratory courier or McLaren/Hart staff. All sampling locations and procedures were documented in a bound field notebook used to record daily activities at the site.

O:\COMMON\dryusa.wpd

SAMPLE CUSTODY PROCEDURES

Sample custody procedures are designed to comply with U.S. EPA and National Enforcement Investigation Council (NEIC) requirements for sample control. Samples collected during a site investigation are the responsibility of identified persons from the time they were collected until they or their derived data are incorporated into the final report. Stringent chain-of-custody procedures were followed to maintain and document sample possession.

Chain-of-custody forms were competed to the fullest extent possible prior to sample shipment. They included the following information:

- Sample identification;
- Date collected;
- Source of sample (including type of sample and site identification);
- Sampler name.

The forms were filled out in a legible manner using waterproof ink and were signed by the sampler. Similar information was provided on the sample label, which was securely attached to the sample bottle. Samples were always accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them signed, dated and noted the time on the record. A separate custody record accompanied each sample container. A copy of the custody record was retained by the field sampler and filed upon return to the office.

coc.sop mw059503\sirae.rpt

SOIL PROBE SAMPLE COLLECTION METHODS

A soil probe (Geoprobe[®] or other) unit consists of a hydraulic ram with a hydraulic hammer, the sampling probe and driving rods. The sampling probe is a one- or two-inch diameter stainless steel tube into which a disposable polyethylene liner is inserted prior to each sampling event. The sampler is then driven into the ground using the hydraulic ram or, when the hydraulic ram cannot exert enough pressure to continue to push the sampler into the ground, the hammer.

Prior to driving the sampler into the ground and between each sampling event, the stainless steel tube was washed in a solution of water and Alconox[®]. The sampler was rinsed in clean water. A new, clean plastic sleeve was inserted for each sampling event. The plastic sleeves are disposable and not intended for reuse.

After the sampler penetrated the ground to the appropriate depth, the nose plug was removed (oneinch sampler only; the two-inch sampler does not use a nose plug) and the sampler was pushed/hammered an additional two feet into the ground (undisturbed soil collection procedures). Upon advancing the sampler two feet (one-inch sampler) or four feet (two-inch sampler), the entire sampler, with the plastic sleeve intact, was withdrawn. The plastic sleeve was then provided to the on-site geologist or scientist for soil classification and sample containerization.

O: COMMON dryusa.wpd



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB1 4-6 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224706 Date Reported : 05/06/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
TOTSOLID			SM2540G	05/05/199	7 PHS			
	Parameter			Re	sult Units	Flag	LOD	LOQ
	Total Soli	ds			86 percent			
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 RJN

Parameter	Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane	ND	ug/kg		25	60
\checkmark 1,2-Dichloroethane	ND	ug/kg		25	60
✓ 1,1-Dichloroethene	ND	ug/kg		25	60
∠cis-1,2-Dichloroethene	ND	ug/kg		25	60
trans-1,2-Dichloroethene	ND	ug/kg		25	60
<pre>✓Tetrachloroethene</pre>	180	ug/kg		29	70
<pre>/1,1,1-Trichloroethane</pre>	ND	ug/kg		25	60
<pre>/1,1,2-Trichloroethane</pre>	ND	ug/kg		25	60
Trichloroethene	ND	ug/kg		25	60
Ninyl chloride	ND	ug/kg		25	60
Dibromofluoromethane (SS)	98	%Recov			
Toluene-d8 (SS)	100	%Recov			
4-Bromofluorobenzene (SS)	90	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

Sanceau



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis / Date	Analyzed By			
TOTSOL ID			SM2540G	05/05/1997	PHS			
	Parameter			Resi	ult Units	Flag	LOD	LOQ
	Total Solic	ls			84 percent			
Analysis	Prep Method	Prep Date	Analysis Method	Analysis / Date	Analyzed By			

Lab Certifications

Location

Sample Desc. :

Wisconsin: 405132750

Your Sample ID: SB2 5-7

En Chem Proj# : 9705019

En Chem Lab # : 224707

Sample Matrix : SOIL

Minnesota: 055-999-334 Iowa: 135

: PRJ# 100805104001001/SPIC&SPAN

Date Collected: 04/30/1997

Date Received : 05/01/1997

Date Reported : 05/06/1997

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 RJN

Parameter R	esult	Units	Flag	LOD	LOQ
1,1-Dichloroethane	ND	ug/kg		25	60
1,2-Dichloroethane	ND	ug/kg		25	60
1,1-Dichloroethene	ND	ug/kg		25	60
cis-1,2-Dichloroethene	ND	ug/kg		25	60
trans-1,2-Dichloroethene	ND	ug/kg		25	60
Tetrachloroethene	140) ug/kg		30	72
1,1,1-Trichloroethane	ND	ug/kg		25	60
1,1,2-Trichloroethane	ND	ug/kg		25	60
Trichloroethene	ND	ug/kg		25	60
Vinyl chloride	ND	ug/kg		25	60
Dibromofluoromethane (SS)	98	%Recov			
Toluene-d8 (SS)	99	%Recov			
4-Bromofluorobenzene (SS)	93	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

These results have been reviewed and their authenticity verified by:

ranceau

... chemistry for the environment



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB3 3-5 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224708 Date Reported : 05/08/1997

Bill to: MCLAREN/HART

				-			
		SM2540G	05/05/1997	7 PHS			
arameter			Res	sult Units	Flag	LOD	LOQ
otal Solids				85 percent			
Prep lethod	Prep Date	Analysis Method	Analysis Date	Analyzed By			
	otal Solids Prep ethod	otal Solids Prep Prep ethod Date	otal Solids Prep Prep Analysis ethod Date Method	otal Solids Prep Prep Analysis Analysis ethod Date Method Date	otal Solids 85 percent Prep Prep Analysis Analysis Analyzed ethod Date Method Date By	otal Solids 85 percent Prep Prep Analysis Analyzed ethod Date Method Date By	otal Solids 85 percent Prep Prep Analysis Analysis Analyzed ethod Date Method Date By

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter	Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane	ND	ug/kg		25	60
1,2-Dichloroethane	ND	ug/kg		25	60
1,1-Dichloroethene	ND	ug/kg		25	60
cis-1,2-Dichloroethene	ND	ug/kg		25	60
trans-1,2-Dichloroethene	ND	ug/kg		25	60
Tetrachloroethene	65	ug/kg	Q	29	70
1,1,1-Trichloroethane	ND	ug/kg		25	60
1,1,2-Trichloroethane	ND	ug/kg		25	60
Trichloroethene	ND	ug/kg		25	60
Vinyl chloride	ND	ug/kg		25	60
Dibromofluoromethane (SS)	110	%Recov			
Toluene-d8 (SS)	106	%Recov			
4-Bromofluorobenzene (SS)	98	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

ranceau



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB3 5-7 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224709 Date Reported : 05/08/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
TOTSOLID			SM2540G	05/05/1993	7 PHS			
	Parameter			Re	sult Units	Flag	LOD	LOQ
	Total Solids			82 percent				
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter	Result	Units	Flag	LOD	LOQ	
1,1-Dichloroethane	ND	ug/kg		25	60	
1,2-Dichloroethane	ND	ug/kg		25	60	
1,1-Dichloroethene	ND	ug/kg		25	60	
cis-1,2-Dichloroethene	ND	ug/kg		25	60	
trans-1,2-Dichloroethene	ND	ug/kg		25	60	
Tetrachloroethene	51	ug/kg	Q	31	74	
1,1,1-Trichloroethane	ND	ug/kg		25	60	
1,1,2-Trichloroethane	ND	ug/kg		25	60	
Trichloroethene	ND	ug/kg		25	60	
Vinyl chloride	ND	ug/kg		25	60	
Dibromofluoromethane (SS)	111	%Recov				
Toluene-d8 (SS)	109	%Recov				
4-Bromofluorobenzene (SS)	98	%Recov				

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

Warceau



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB4 2-4 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224710 Date Reported : 05/08/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
TOTSOLID			SM2540G	05/05/1997	PHS			
	Parameter			Res	ult Units	Flag	LOD	LOQ
	Total Solids			92 percent				
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
		· · · · · · · · · · · · · · · · · · ·						

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter	Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane	ND	ug/kg		25	60
1,2-Dichloroethane	ND	ug/kg		25	60
1,1-Dichloroethene	ND	ug/kg		25	60
cis-1,2-Dichloroethene	ND	ug/kg		25	60
trans-1,2-Dichloroethene	ND	ug/kg		25	60
Tetrachloroethene	47	ug/kg	Q	27	65
1,1,1-Trichloroethane	ND	ug/kg		25	60
1,1,2-Trichloroethane	ND	ug/kg		25	60
Trichloroethene	ND	ug/kg		25	60
Vinyl chloride	ND	ug/kg		25	60
Dibromofluoromethane (SS)	115	%Recov			
Toluene-d8 (SS)	110	%Recov			
4-Bromofluorobenzene (SS)	98	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

ranceau



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB4 4-6 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224711 Date Reported : 05/07/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
TOTSOLID		<u>- 11 11- Are an Onnesin progeng</u>	SM2540G	05/05/199	P7 PHS			
	Parameter			Re	sult Units	Flag	LOD	LOQ
	Total Solids			83 percen				
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
				00				

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter	Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane	ND	ug/kg		25	60
1,2-Dichloroethane	ND	ug/kg		25	60
1,1-Dichloroethene	ND	ug/kg		25	60
cis-1,2-Dichloroethene	ND	ug/kg		25	60
trans-1,2-Dichloroethene	ND	ug/kg		25	60
Tetrachloroethene	140	ug/kg		30	72
1,1,1-Trichloroethane	ND	ug/kg		25	60
1,1,2-Trichloroethane	ND	ug/kg		25	60
Trichloroethene	ND	ug/kg		25	60
Vinyl chloride	ND	ug/kg		25	60
Dibromofluoromethane (SS)	108	%Recov			
Toluene-d8 (SS)	101	%Recov			
4-Bromofluorobenzene (SS)	95	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

iranceau



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET

	BROOKFIE							
Bill to	D: MCLAREN,	HART						
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Anal Date E	lyzed By			
TOTSOL ID			SM2540G	05/05/1997 F	PHS			
	Parameter			Result	Units	Flag	LOD	LOQ
	Total Solid	ls		94	percent			
Analysis	Prep	Prep	Analysis Method	Analysis Anal	lyzed			

Lab Certifications

Location

Sample Desc. :

Wisconsin: 405132750

Your Sample ID: SB5 2-4

En Chem Proj# : 9705019

En Chem Lab # : 224712

Sample Matrix : SOIL

Minnesota: 055-999-334 Iowa: 135

: PRJ# 100805104001001/SPIC&SPAN

Date Collected: 04/30/1997

Date Received : 05/01/1997

Date Reported : 05/07/1997

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter	Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane	ND	ug/kg		25	60
1,2-Dichloroethane	ND	ug/kg		25	60
1,1-Dichloroethene	ND	ug/kg		25	60
cis-1,2-Dichloroethene	ND	ug/kg		25	60
trans-1,2-Dichloroethene	ND	ug/kg		25	60
Tetrachloroethene	230	ug/kg		26	62
1,1,1-Trichloroethane	ND	ug/kg		25	60
1,1,2-Trichloroethane	ND	ug/kg		25	60
Trichloroethene	ND	ug/kg		25	60
Vinyl chloride	ND	ug/kg		25	60
Dibromofluoromethane (SS)	117	%Recov			
Toluene-d8 (SS)	115	%Recov			
4-Bromofluorobenzene (SS)	103	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

These results have been reviewed and their authenticity verified by:

ra rean

... chemistry for the environment



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
TOTSOL ID			SM2540G	05/05/1997	7 PHS			
	Parameter			Res	sult Units	Flag	LOD	LOQ
	Total Solids		81 percent					
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			

Lab Certifications

Location

Sample Desc. :

Wisconsin: 405132750

Your Sample ID: SB5 4-6

En Chem Proj# : 9705019

En Chem Lab # : 224713

Sample Matrix : SOIL

Minnesota: 055-999-334 Iowa: 135

: PRJ# 100805104001001/SPIC&SPAN

Date Collected: 04/30/1997

Date Received : 05/01/1997

Date Reported : 05/07/1997

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter	Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane	ND	ug/kg		25	60
1,2-Dichloroethane	ND	ug/kg		25	60
1,1-Dichloroethene	ND	ug/kg		25	60
cis-1,2-Dichloroethene	ND	ug/kg		25	60
trans-1,2-Dichloroethene	ND	ug/kg		25	60
Tetrachloroethene	220	ug/kg		31	74
1,1,1-Trichloroethane	ND	ug/kg		25	60
1,1,2-Trichloroethane	ND	ug/kg		25	60
Trichloroethene	ND	ug/kg		25	60
Vinyl chloride	ND	ug/kg		25	60
Dibromofluoromethane (SS)	111	%Recov			
Toluene-d8 (SS)	103	%Recov			
4-Bromofluorobenzene (SS)	95	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

These results have been reviewed and their authenticity verified by:

ranceau

. . . chemistry for the environment



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB6 2-4 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224715 Date Reported : 05/08/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Analyz Date By	ed		
TOTSOLID			SM2540G	05/05/1997 PHS			
	Parameter			Result Un	nits Flag	LOD	LOQ
	Total Soli	ds		93 pe	rcent		
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Analyz Date By	ed		

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter Result	t Units	Flag	LOD	LOQ
1,1-Dichloroethane ND	ug/kg		25	60
1,2-Dichloroethane ND	ug/kg		25	60
1,1-Dichloroethene ND	ug/kg		25	60
cis-1,2-Dichloroethene ND	ug/kg		25	60
trans-1,2-Dichloroethene ND	ug/kg		25	60
Tetrachloroethene 56	6 ug∕kg	Q	27	65
1,1,1-Trichloroethane ND	ug/kg		25	60
1,1,2-Trichloroethane ND	ug/kg		25	60
Trichloroethene ND	ug/kg		25	60
Vinyl chloride ND	ug/kg		25	60
Dibromofluoromethane (SS) 111	7 %Recov			
Toluene-d8 (SS) 112	2 %Recov			
4-Bromofluorobenzene (SS) 103	3 %Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

rancean



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB6 4-6 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224716 Date Reported : 05/08/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Analyzed Date By			
TOTSOLID			SM2540G	05/05/1997 PHS			
	Parameter			Result Unit	s Flag	LOD	LOQ
	Total Solid	ds		85 perc	ent		
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Analyzed Date By			

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane ND	ug/kg		25	60
1,2-Dichloroethane ND	ug/kg		25	60
1,1-Dichloroethene ND	ug/kg		25	60
cis-1,2-Dichloroethene ND	ug/kg		25	60
trans-1,2-Dichloroethene ND	ug/kg		25	60
Tetrachloroethene 35	ug/kg	Q	30	72
1,1,1-Trichloroethane ND	ug/kg		25	60
1,1,2-Trichloroethane ND	ug/kg		25	60
Trichloroethene ND	ug/kg		25	60
Vinyl chloride ND	ug/kg		25	60
Dibromofluoromethane (SS) 111	%Recov			
Toluene-d8 (SS) 105	%Recov			
4-Bromofluorobenzene (SS) 97	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

ronceau



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB7 2-4 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224714 Date Reported : 05/07/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Analyze Date By	ed		
TOTSOLID			SM2540G	05/05/1997 PHS			
	Parameter			Result Uni	its Flag	LOD	LOQ
	Total Solid	S		93 per	cent		
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Analyze Date By	ed		

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane ND	ug/kg		750	1800
1,2-Dichloroethane ND	ug/kg		750	1800
1,1-Dichloroethene ND	ug/kg		750	1800
cis-1,2-Dichloroethene ND	ug/kg		750	1800
trans-1,2-Dichloroethene ND	ug/kg		750	1800
Tetrachloroethene ND	ug/kg		750	1800
1,1,1-Trichloroethane ND	ug/kg		750	1800
1,1,2-Trichloroethane ND	ug/kg		750	1800
Trichloroethene ND	ug/kg		750	1800
Vinyl chloride ND	ug/kg		750	1800
Dibromofluoromethane (SS) 86	%Recov			
Toluene-d8 (SS) 112	%Recov			
4-Bromofluorobenzene (SS) 125	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

Urancean



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005 Lab Certifications Wisconsin: 405132750 ... chemistry for the environment Minnesota: 055-999-334 Iowa: 135 Location : PRJ# 100805104001001/SPIC&SPAN Your Sample ID: SB8 4-5 Sample Desc. : Sample Matrix : SOIL Date Collected: 04/30/1997 En Chem Proj# : 9705019 Date Received : 05/01/1997 En Chem Lab # : 224717 Date Reported : 05/08/1997

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
TOTSOLID	<u> </u>		SM2540G	05/05/1997	PHS			
	Parameter			Res	ult Units	Flag	LOD	LOQ
	Total Soli	ds		Analysis Analyzed Date By 05/05/1997 PHS Result Units Flag LOD LOQ 79 percent Analysis Analyzed Date By				
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane ND	ug/kg		25	60
1,2-Dichloroethane ND	ug/kg		25	60
1,1-Dichloroethene ND	ug/kg		25	60
cis-1,2-Dichloroethene ND	ug/kg		25	60
trans-1,2-Dichloroethene ND	ug/kg		25	60
Tetrachloroethene 87	ug/kg		32	77
1,1,1-Trichloroethane ND	ug/kg		25	60
1,1,2-Trichloroethane ND	ug/kg		25	60
Trichloroethene ND	ug/kg		25	60
Vinyl chloride ND	ug/kg		25	60
Dibromofluoromethane (SS) 108	%Recov			
Toluene-d8 (SS) 103	%Recov			
4-Bromofluorobenzene (SS) 97	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

cear



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005

Bill to: MCLAREN/HART

Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			
TOTSOLID			SM2540G	05/05/1997	PHS			
	Parameter			Res	ult Units	Flag	LOD	LOQ
	Total Solid	ds			80 percent			
Analysis	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By			

Lab Certifications

Location

Sample Desc. :

Wisconsin: 405132750

Your Sample ID: SB8 5-7

En Chem Proj# : 9705019

En Chem Lab # : 224718

Sample Matrix : SOIL

Minnesota: 055-999-334 Iowa: 135

: PRJ# 100805104001001/SPIC&SPAN

Date Collected: 04/30/1997

Date Received : 05/01/1997

Date Reported : 05/08/1997

8260+-S-ME SW846 5030 05/02/1997 SW846 8260 05/05/1997 CJG

Parameter Result	Units	Flag	LOD	LOQ
1,1-Dichloroethane ND	ug/kg		25	60
1,2-Dichloroethane ND	ug/kg		25	60
1,1-Dichloroethene ND	ug/kg		25	60
cis-1,2-Dichloroethene ND	ug/kg		25	60
trans-1,2-Dichloroethene ND	ug/kg		25	60
Tetrachloroethene 32	ug/kg	Q	31	74
1,1,1-Trichloroethane ND	ug/kg		25	60
1,1,2-Trichloroethane ND	ug/kg		25	60
Trichloroethene ND	ug/kg		25	60
Vinyl chloride ND	ug/kg		25	60
Dibromofluoromethane (SS) 110	%Recov			
Toluene-d8 (SS) 103	%Recov			
4-Bromofluorobenzene (SS) 95	%Recov			

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

These results have been reviewed and their authenticity verified by:

50 ron

... chemistry for the environment



Report to: MC LAREN/HART 3695-M NORTH 126TH STREET BROOKFIELD, WI 53005

Bill to: MCLAREN/HART

	Prep	Prep	Analysis	Analysis	Analyzed
Analysis	Method	Date	Method	Date	Ву

8260+ SW846 5030 05/02/1997 SW846 8260 05/05/1997 RJN

Parameter	Result U	nits	Flag	LOD	LOQ
1,1-Dichloroethane	ND U	g/l		25	60
1,2-Dichloroethane	ND U	g/l		25	60
1,1-Dichloroethene	ND u	g∕l		25	60
cis-1,2-Dichloroethene	ND u	g∕l		25	60
trans-1,2-Dichloroethene	ND u	g∕l		25	60
Tetrachloroethene	ND u	g/l		25	60
1,1,1-Trichloroethane	ND u	g/l		25	60
1,1,2-Trichloroethane	ND u	g/l		25	60
Trichloroethene	ND u	g/l		25	60
Vinyl chloride	ND u	g/l		25	60
Dibromofluoromethane (SS)	83 %	Recov			
Toluene-d8 (SS)	85 %	Recov			
4-Bromofluorobenzene (SS)	94 %	Recov			

Lab Certifications

Location

Sample Desc. :

Wisconsin: 405132750

Minnesota: 055-999-334 Iowa: 135

Your Sample ID: MEOH BLANK

Sample Matrix : METHANOL

En Chem Proj# : 9705019

En Chem Lab # : 224719

: PRJ# 100805104001001/SPIC&SPAN

Date Collected: 04/30/1997

Date Received : 05/01/1997

Date Reported : 05/06/1997

... chemistry for the environment

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by appropriately certified laboratories.

ſ <u>.</u>		[1						s et e e e e e e e e e e e e e e e e e e		en Bester		- 6¢	ennik contarrotteroterit a	destana ny ka manana .
Company Na	ame: McLAren/Har	t			<i>(</i>)		1		CHAI	N OF	P.O. #		Quote	<u># 3429</u>	Page of
Branch or Lo	ocation: Brookfield			_ 1	EN CHEM CUSTODY						Mail Report To: Brian Schneiler				
Project Cont	act: Brian Schneider	-		=	-\			1	NC. COD		Comp	any:	MCLARCN	Hart	
Telephone:	414-790-1974			[1241 Bellevue St., Suite 9 2231 Catlin Ave., Suite 420						Addre	ss: 🤇	3695 M	NIZ	6th St
Project Num	ber: 1028051040	0100	21	41	Green 4-469-24	Bay, WI 36 • 1-8	54302 00-736-	-2436	Superior, WI 6 715-392-5844 • 1-8	54880 300-837-8238			<u>Brockfiel</u>	1, WF	53005
Project Name: Spic + Spin, Brownsitures					FAX	414-469	-8827		FAX 715-39	2-5843	Invoic	e To: [Brian Sc	hneile	
Project Location: Brownstores Shapping Mell						6	ليا .M .08-827	adis 1801	D2 Deming way on, WI 53717 1 • 1.888.5 ENCHEM		Comp	any:			
Sampled By	(Print): TIM BONK	<u>'')</u>					F	`ax: 6	608-827-5503		Addre	ss:			
Regulatory F	Program (circle): UST RCRA	CLP S	DWA	NR	720 Conf	irmatior	n Analys	sis F	Required?						
NPDES/WP	DES CAA NR Other			(En	Chem w	vill confi	rm unle	ess o	therwise instructed.)		Mail In	voice To	Brian S	Schneid	ler
Field ID	Sample Description	C	ollection	Field Screen	Matrix	Filt'd Y/N	Preserv	v*	Analysis Requested		Good	Total	Comme	abonatory c	Laboratory
							Vac-	F	512 846 8	260/+0	rict	1-202	M		Number
<u>SB14-</u>	6	<u> <u> </u></u>	30	NĄ	Soil	NA	DRYW	#-A	Dr.y Wt		*) /	1 1-4	poer		224706
582 5-7					-					C					224707
583 3-5															234708
SB3 5-7	7														224709
584 2-4															224710
CRU 4-6														*****	-224711
501 10															00711
585 2-4							┝╌┠─								224712
SB5 4-6										procession and a second se					224413
5B7 2-4															224714
SBG 2-4															224715
SB6 4-6	, ,							_							224716
5B8 4-5	-	5		\downarrow		1	V		\checkmark		\mathbf{V}				224717
A-None	*Preservation Code B-HCL C-H2SO4	Relinquishe	ed By:	l			Date/T	l'ime:	14 11:00	Received By:	ch s	17	7-	En Chem P	roject No.
D=HN03 G=NaOH	E=EnCore F=Methanol** O=Other (Indicate)	Relinquishe		\sim			Date/T	Time:	41 10.00	Received By:	<u>7//</u>	511	191	Sample Rec	CIT ceipt Temp.
**If not using En Chem's methanol, indi-			it			5/		193 (2:00	Baceivad Bu	e der	, 132	<u>20 Ro, </u>		U a (4 U)	
cate volum the approp	e of methanol added and mark riate samples.	aw	ecle	V			51] [97) 1610	Shu		Duta	tr	ROF	

Company Name: Branch or Location: Project Contact: Telephone:		E 414-4	1241 Bellev Green Bay, V 69-2436 • 1	HE ue St., Suit VI 54302 800-736-2	CHA CM INC. CUS te 9 2231 Cat Superior 436 715-392-5844	LIN OF STODY In Ave., Suite 420 r, WI 54880 • 1-800-837-8238	P.O. # Mail R Compa Addres	eport To any: ss:	SAR ^{C-}	# <u>3429</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Page 2 of 2	
Project Name: Project Location: Sampled By (Print): Regulatory Program (circle): UST RCRA CLP SDWA			B02 Deming Way Madison, WI 53717 608-827-5501 • 1-888-5 ENCHEM Fax: 608-827-5503 NR720 Confirmation Analysis Required?						Invoice To: 0			
NPDES/WPDES CAA NROther Field ID Sample Description Col	lection	Field M	atrix Filt'e	Preserv*	S otherwise instructed. Analysis) B	Good	SHAI	DED AREA FOR L	ABORATORY US	SE ONLY Laboratory	
Date 5B3 5-7 4/30		NA S.	VIN II NA	VikF DRYWt-	Requeste SW 346 3 A Drywr	200 (targe list	Cond.	Bottles	e M -M		Number 224718	
*Preservation Code Relinquished A=None B=HCL C=H2SO4 D=HN03 E=EnCore F=Methanol** G=NaOH O=Other (Indicate) Relinquished **If not using En Chem's methanol, indicate volume of methanol added and mark the appropriate samples. Relinquished	By: By: By: By: By: By: By: Cer	L M		Date/Tin Date/Tin Date/Tin 5/1/	ne: 11/47/0:00 147/3:20 ne: 1/97/16/0	Received By: Received By: Re	En Chem	111 ° 13	Par 17 20 Bor	En Chem Pr 97052 Sample Rec (Must be rei COT	roject No.)/ / eipt Temp. c'd at 4°C)	



... chemistry for the environment

1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827 Lab Certification No. 405132750 Location : PRJ# 100805104001001/SPIC&SPAN En Chem Proj# : 9705019 Date Reported : 05/08/1997

Report to: MC LAREN/HART

Thank you for using En Chem! Samples were analyzed according to strict EPA or Wisconsin DNR methodology. Any comments or problems associated with the receipt of or analysis are reported below:

The LOQ for the VOC analysis is 60 ug/kg for those samples with a dilution factor of 50. Detection limits are corrected for percent solids for those parameters that were detected.

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and LOQ.

Sample nos. 224708, 224709, 224710, 224715, 224716 and 224718: The presence of Tetrachloroethene was confirmed on 05/07/97 by a second GC/MS analysis.

Sample no. 224714: Detection limit for VOC elevated due to the presence of an unrequested analyte.



Collection

Date

- Analytical Report -

Sample No.

Project Name : DRYCLEAN USA Project Number: 100805104001

WI DNR LAB ID: 405132750

Client: MC LAREN/HART

Report Date : 1/15/98

Field ID

Sample No.	Field ID	Collection Date
880135-001	SB-12 3'-4'	1/10/98
880135-002	SB-12 5'-7'	1/10/98
880135-003	SB-13 3'-4'	1/10/98
880135-004	SB-13 5'-7'	1/10/98
880135-005	SB-11 3'-4'	1/10/98
880135-006	SB-11 5'-6'	1/10/98
880135-007	SB-14 2'-4'	1/10/98
880135-008	SB-14 6'-8'	1/10/98
880135-009	SB-17 2'-4'	1/10/98
880135-010	SB-17 6'-8'	1/10/98
880135-011	SB-15 2'-4'	1/10/98
880135-012	SB-15 6'-8'	1/10/98
880135-013	MEOH BLANK	1/10/98

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

0 roa

Approval Signature

ilislas

Date



Project Name : DRYCLEAN USA	
Project Number: 100805104001	Client : MC LAREN/HART
Field ID : SB-12 3'-4'	Report Date: 1/14/98
Lab Sample Number: 880135-001	Collection Date: 1/10/98
WI DNR LAB ID: 405132750	Matrix Type: SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	88.4				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST - SOIL/METHANOL			Prep Method: SW846 5030			Prep Date:	1/13/98	Analyst: JJB
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1-Dichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	< 25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene	90				%Recov		1/13/98	SW846 8260
Dibromofluoromethane	98				%Recov		1/13/98	SW846 8260
Toluene-d8	97				%Recov		1/13/98	SW846 8260



Project Name :	DRYCLEAN USA	
Project Number :	100805104001	Client : MC LAREN/HART
Field ID :	SB-12 5'-7'	Report Date: 1/14/98
Lab Sample Number :	880135-002	Collection Date: 1/10/98
WI DNR LAB ID :	405132750	Matrix Type: SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	82.5				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST - SOIL/METHANOL			L	Prep Method: SW846 5030			Prep Date:	1/13/98	Analyst: JJB
Analyte	R	esult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	<	25	25	60	2	ug/kg		1/13/98	SW846 8260
1,1-Dichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	<	25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene		99				%Recov		1/13/98	SW846 8260
Dibromofluoromethane		107				%Recov		1/13/98	SW846 8260
Toluene-d8		106				%Recov		1/13/98	SW846 8260



Project Name :	DRYCLEAN USA		
Project Number :	100805104001	Client :	MC LAREN/HART
Field ID :	SB-13 3'-4'	Report Date :	1/14/98
Lab Sample Number :	880135-003	Collection Date :	1/10/98
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	81.9				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

PECIAL VOLATILE LIST - SOIL/METHANOL			Prep Method: SW846 5030			Prep Date:	1/13/98	Analyst: JJB
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1-Dichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	< 25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene	93				%Recov		1/13/98	SW846 8260
Dibromofluoromethane	102				%Recov		1/13/98	SW846 8260
Toluene-d8	101				%Recov		1/13/98	SW846 8260



Project Name : DRYCLEAN USA	
Project Number: 100805104001	Client : MC LAREN/HART
Field ID : SB-14 2'-4'	Report Date: 1/14/98
Lab Sample Number : 880135-007	Collection Date: 1/10/98
WI DNR LAB ID: 405132750	Matrix Type: SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	86.8				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST	SOIL/N	IETHANO	L	Prep Met	nod: SW	846 5030	Prep Date:	1/13/98	Analyst: JJB
Analyte	R	esult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1-Dichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	<	25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene		99				%Recov		1/13/98	SW846 8260
Dibromofluoromethane		109				%Recov		1/13/98	SW846 8260
Toluene-d8		107				%Recov		1/13/98	SW846 8260



Project Name :	DRYCLEAN USA		
Project Number :	100805104001	Client :	MC LAREN/HART
Field ID :	SB-13 5'-7'	Report Date :	1/14/98
Lab Sample Number :	880135-004	Collection Date :	1/10/98
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	79.1				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST -	SOIL/M	ETHANOL		Prep Met	nod: SW	846 5030	Prep Date:	1/13/98	Analyst: JJB
Analyte	Re	esult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	<	25	25	60		ug/kg	,	1/13/98	SW846 8260
1,1-Dichlorcethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	< (25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	<	25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene		97				%Recov		1/13/98	SW846 8260
Dibromofluoromethane		106				%Recov		1/13/98	SW846 8260
Toluene-d8		102				%Recov		1/13/98	SW846 8260



Project Name :	DRYCLEAN USA
Project Number :	100805104001
Field ID :	SB-11 3'-4'
Lab Sample Number :	880135-005
WI DNR LAB ID :	405132750

Client :	MC LAREN/HART
Report Date :	1/14/98
Collection Date :	1/10/98
Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	85.2				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST -	SOIL/METHANOL		Prep Met	hod: SW	846 5030	Prep Date:	1/13/98	Analyst: JJB
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	< 25	25	60		ug/kg	2. 2 ² .	1/13/98	SW846 8260
1,1-Dichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	< 25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene	98				%Recov		1/13/98	SW846 8260
Dibromofluoromethane	110				%Recov		1/13/98	SW846 8260
Toluene-d8	106				%Recov		1/13/98	SW846 8260



Project Name :	DRYCLEAN USA		
Project Number :	100805104001	Client :	MC LAREN/HART
Field ID :	SB-11 5'-6'	Report Date :	1/14/98
Lab Sample Number :	880135-006	Collection Date :	1/10/98
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	84.8				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST - SOIL/METHANOL Prep Method: SW846 5030 Prep Date: 1/13/98 Analyst: JJB Analysis Analysis Result LOD LOQ EQL Analyte Units Code Date Method 1,1-Dichloroethane 25 25 SW846 8260 < 60 ug/kg 1/13/98 1,1-Dichloroethene < 25 25 60 ug/kg 1/13/98 SW846 8260 1,2-Dichloroethane < 25 25 60 ug/kg 1/13/98 SW846 8260 trans-1,2-Dichloroethene 25 < 25 60 1/13/98 SW846 8260 ug/kg 1,1,1-Trichloroethane 25 25 1/13/98 SW846 8260 60 ug/kg < 1,1,2-Trichloroethane SW846 8260 < 25 25 60 1/13/98 ug/kg Trichloroethene 25 25 60 1/13/98 SW846 8260 < ug/kg Tetrachloroethene < 25 25 60 ug/kg 1/13/98 SW846 8260 Vinyl chloride < 25 25 60 ug/kg 1/13/98 SW846 8260 4-Bromofluorobenzene 97 %Recov 1/13/98 SW846 8260 Dibromofluoromethane 106 %Recov 1/13/98 SW846 8260 Toluene-d8 106 %Recov 1/13/98 SW846 8260


Analyst: JJB

Prep Date: 1/13/98

- Analytical Report -

Project Name :	DRYCLEAN USA		
Project Number :	100805104001	Client :	MC LAREN/HART
Field ID :	SB-14 6'-8'	Report Date :	1/14/98
Lab Sample Number :	880135-008	Collection Date :	1/10/98
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	83.1				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

Prep Method: SW846 5030

SPECIAL VOLATILE LIST - SOIL/METHANOL

Ànalyte	F	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1-Dichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	<	25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	<	25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	<	25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene		104				%Recov		1/13/98	SW846 8260
Dibromofluoromethane		115				%Recov		1/13/98	SW846 8260
Toluene-d8		113				%Recov		1/13/98	SW846 8260



Analyst: JJB

Prep Date: 1/13/98

- Analytical Report -

Project Name :	DRYCLEAN USA	
Project Number :	100805104001	Client : MC LAREN/HART
Field ID :	SB-17 2'-4'	Report Date: 1/14/98
Lab Sample Number :	880135-009	Collection Date: 1/10/98
WI DNR LAB ID :	405132750	Matrix Type : SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	77.4				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

Prep Method: SW846 5030

SPECIAL VOLATILE LIST - SOIL/METHANOL

Analyte	Res	ult	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
1,1-Dichlcroethene	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	< 2	5	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene	1(03				%Recov		1/13/98	SW846 8260
Dibromofluoromethane	1	12				%Recov		1/13/98	SW846 8260
Toluene-d8	1	12				%Recov		1/13/98	SW846 8260

All soil results are reported on a dry weight basis unless otherwise noted.



8.03

- Analytical Report -

Project Name :	DRYCLEAN USA		
Project Number :	100805104001	Client :	MC LAREN/HART
Field ID :	SB-17 5'-8'	Report Date :	1/14/98
Lab Sample Number :	880135-010	Collection Date :	1/10/98
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	80.9				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST -	SOIL/METHANOL		Prep Met	h <mark>od:</mark> SW	846 5030	Prep Date:	1/13/98	Analyst: JJB
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1-Dichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichlorcethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	< 25	25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	< 25	25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	< 25	25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene	100				%Recov		1/13/98	SW846 8260
Dibromofluoromethane	111				%Recov		1/13/98	SW846 8260
Toluene-d8	109				%Recov		1/13/98	SW846 8260



- Analytical Report -

Project Name :	DRYCLEAN USA		
Project Number :	100805104001	Client :	MC LAREN/HART
Field ID :	SB-15 2'-4'	Report Date :	1/14/98
Lab Sample Number :	880135-011	Collection Date :	1/10/98
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	82.6				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST - SOIL/METHANOL Prep Method: SW846 5030 Prep Date: 1/13/98 Analyst: JJB Analysis Analysis Result LOQ EQL Analyte LOD Units Code Date Method 1,1-Dichloroethane SW846 8260 < 25 25 60 ug/kg 1/13/98 1,1-Dichloroethene < 25 25 60 1/13/98 SW846 8260 ug/kg 1,2-Dichloroethane 25 25 60 1/13/98 SW846 8260 < ug/kg trans-1,2-Dichloroethene 1/13/98 25 25 60 SW846 8260 < ug/kg 1,1,1-Trichloroethane 1/13/98 SW846 8260 25 25 60 ug/kg < 1,1,2-Trichloroethane 25 1/13/98 SW845 8260 < 25 60 ug/kg Trichloroethene 25 25 1/13/98 SW846 8260 < 60 ug/kg Tetrachloroethene < 25 25 60 ug/kg 1/13/98 SW846 8260 Vinyl chloride < 25 25 60 1/13/98 SW846 8260 ug/kg 4-Bromofluorobenzene 1/13/98 SW846 8260 92 %Recov Dibromofluoromethane 1/13/98 103 %Recov SW846 8260 Toluene-d8 1/13/98 SW846 8260 102 %Recov

All soil results are reported on a dry weight basis unless otherwise noted.



- Analytical Report -

Project Name :	DRYCLEAN USA		
Project Number :	100805104001	Client :	MC LAREN/HART
Field ID :	SB-15 6'-8'	Report Date :	1/14/98
Lab Sample Number :	880135-012	Collection Date :	1/10/98
WI DNR LAB ID :	405132750	Matrix Type :	SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analyst
Solids, percent	80.6				%		1/13/98	SM2540G	SM2540G	PHS

Organic Results

SPECIAL VOLATILE LIST	SOIL/ME	THANOL	Prep Met	thod: SW	846 5030	Prep Date:	1/13/98	Analyst: JJB
Analyte	Res	ult LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
1,1-Dichloroethane	< 2	5 25	60		ug/kg	, , , , , , , , , , , , , , , , , , ,	1/13/98	SW846 8260
1,1-Dichloroethene	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
1,2-Dichloroethane	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
trans-1,2-Dichloroethene	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
1,1,1-Trichloroethane	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
1,1,2-Trichloroethane	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
Trichloroethene	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
Tetrachloroethene	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
Vinyl chloride	< 2	5 25	60		ug/kg		1/13/98	SW846 8260
4-Bromofluorobenzene	90	6			%Recov		1/13/98	SW846 8260
Dibromofluoromethane	10	04			%Recov		1/13/98	SW846 8260
Toluene-d8	10	05			%Recov		1/13/98	SW846 8260



- Analytical Report -

Project Name : DRYCLEAN USA Project Number : 100805104001 Field ID : MEOH BLANK Lab Sample Number : 880135-013 WI DNR LAB ID : 405132750

Client :	MC LAREN/HART
Report Date :	1/14/98
Collection Date :	1/10/98
Matrix Type :	METHANOL

Organic Results

SPECIAL VOLATILE LIST - METHANOL Prep Method: SW846 5030 Prep Date: 1/13/98 Analyst: JJB Analysis Analysis EQL Result LOD LOQ Units Analyte Code Date Method 1,1-Dichloroethane 25 25 SW846 8260 < 60 ug/L 1/13/98 1,1-Dichioroethene 25 25 60 ug/L 1/13/98 SW846 8260 < 1,2-Dichloroethane 25 25 60 ug/L 1/13/98 SW846 8260 < trans-1,2-Dichloroethene 25 1/13/98 SW846 8260 < 25 60 ug/L 1,1,1-Trichloroethane 25 25 60 ug/L 1/13/98 SW846 8260 < 1,1,2-Trichloroethane 25 25 60 ug/L 1/13/98 SW846 8260 < Trichloroethene 25 25 60 1/13/98 SW846 8260 < ug/L Tetrachloroethene 25 25 60 ug/L 1/13/98 SW846 8260 < Vinyl chloride < 25 25 60 ug/L 1/13/98 SW846 8260 4-Bromofluorobenzene 98 %Recov 1/13/98 SW846 8260 Dibromofluoromethane 100 %Recov 1/13/98 SW846 8260 Toluene-d8 95 %Recov 1/13/98 SW846 8260

Company Name: McLaren Hart			ue St., Suite 9 B02 Demin	g Way 1423 N. 8th Street., Suite 122
Branch or Location: Rewqukee, WI	EN CH	EM 920-469-2436 • 1	wi 54302 Madison, wi 53 -800-736-2436 608-827-5501 • 1-888 69-8827 Fax: 608-827-5	-536-2436 715-392-5844 • 1-800-837-8238 503 FAX 715-392-5843
Project Contact: Brian Schneider				/
Telephone: 414 523-2040	CHAIN OF	CUSTODY	9 6549	Page of
Project Number: 10080 5104 001			den hat hit has	P.O. # Quote #1 1000
ning handlen 115A	FILTERED? (YE			mpany: Mclaren Hart
Report Of Start	PRESERVATION (COL	DE)*	Addres	s W239 N 2890 Pewouke
roject Location: <u>py 00 IC +1 +1 4 00 1</u>	J. J.			Pewankee W1 5307
ampled By (Print): Deorge J. Daver		1. Y. Y. /	Invoice To:	SAME
legulatory Program (<i>circle</i>): UST HCRA CLP SDWA NPDES/WPDES CAA NR	LE V		Company:	1 - 1
Other	LE LE		Address:	
IR720 Confirmation Analysis Required? (<i>Circle):</i> Y N En Chemwill not confirm unless otherwise instructed.)	JE STAN		Mail Invoice To:	
EIELD ID SAMOLE DESCRIPTION COLLEC		Y .Y .X / /	SHADED A	REA FOR LABORATORY USE ONLY
DATE	TIME / GX Y Y	<u> </u>	SCREEN COND. BOTTLES	COMMENTS
SB-12 3-4' 1/10/98			Sil X 1-20m	
SB-12 5'-7'				500
SB-13 3'-4'				<i>c</i> o3
SB-13 5-7'				004
SB-11 3-4				005
SB-11 5-6				006
SB-14 2'-4'				@7
SB-14 6-8'				008
SB-17 2-4'				တျ
SB-17 6-8'				OIO
SB-15 2-4				011
SB-15 6-8'			VV	012
MEOH BLANK V	UL I		V rian	013
*Preservation Code A=None B=HCL C=H2SO4	Mayen 1/12/91	e: Received By:	Butte 1/13/91	ine: En Chem Project No.
D=HN03 E=EnCore F=Methanol** Relinquished By	Date/Tim	e: Received By	Date/T	ime: Sample Receipt Temp,
SanNo(1)H (Inclusion)	1 21 TI . 11121981	1111 15 128 1	and 1-1798 113	50 1991
Relinguisted By:	Date/Time	e: Received By:	Date/T	ime: Sample Receipt pH

State o Depar	of Wisco tment of	nsin Natur	al Reso	urces	Route To: Solid Waste Emergency Response	se 🗌 U	łaz. W Jnderg	Vaste ground	Tanks			SOI For	L BOR n 4400	ING LO -122	OG INF	ORMA	TION 7-91
					☐ Wastewater		Vater : Other	Resou	rces					Pag	e 1	of 1	L
Facilit	y/Projec	et Nam	e				Lice	nse/Pe	rmit/M	onitorir	g Nun	ıber	Boring	Numb	er		
Dry	clean	USA	Facili	ty	f arow abiat		Data	D.:11	na Stor	ad .	Date	Drillin	SB-1	plated	Drillin	a Math	
On-	Site E	nviroi	ment	al/Denny T	otske		Date			leu	Date			pieteu	Celle	g Meui	lou
								4/	30/97			4/3	0/97		Soup	robe	
DNR	Facility	Well N	lo. W	I Unique Well	No. Common Well	Name	Fina	l Stati	c Water Fee	Level	Surf	ace Ele	vation Feet	B	orehole	Diame	eter nches
Boring	g Locatio	on	00000000000000000				 	T = 4	0 1 11	-	Loca	al Grid	Locatio	n (If ap	plicable	2)	
State	Plane	.f	1//	1 of Section	N, E S	S/C/N	T	Lai	0 ' "			Fa		N S	1	[Feet [
Count	y 1/4 (+ 01 Section	1 N,K	DNR Co	unty C	Code	Civil T	'own/Ci	ty/ or	Village					
Wa	ukesha		T	r					Broo	kfield		1					······
Sar	nple												Soil	Proper	rties		-
		nts	feet	S	oil/Rock Description	on											
er	n (in ered	Cou	In I	An	d Geologic Origin	For		S	ic.	E	Ð	atio	Ite				lents
quu	sngt	MO	epth		Each Major Unit			sc	raph og	ell iagr:	D/F	anda	oist	mit	astic	200	DV/
_ <u>_</u>	<u>ع</u> ي	BI	<u>ă</u>					D	L C	≩ŭ	Id	PS	ΣŬ	<u> </u>	Li	<u> </u>	۳Q
			E	(concrete)					\bigotimes						4		
1	24			FILL, crush	ed stone and sand				\bigotimes								
			Ē														
			\mathbb{E}^2														
			<u>-</u> 3						\bigotimes								
2	20		E														
			-4					01									
			F	CLAY, silty	, trace fine to coarse gr	rained		CL									
3	12		_5	sand, brown	n, dry.												
			-6						//////								
I here	hy certif	that :	the info	rmation on the	s form is true and corre	et to the b	est of	myb	owleda	re		1	L				<u>]</u>
Signat	ure	y mat		mation on un			Firm	IIIY KI	McLo	ren/U	art			<u></u>			
-									Brookf	ield, W	isconsi	n					
	•			71	147		L	6.1.1	Tel: 41	4-790-1	974,	Fax: 41	4-790-	1989	1	. 610	
more t	orm is a than \$5,	utnoriz 000 foi	reach v	napters 144, violation. Fine	ed not less than \$10 or n	nore than !	stion o \$100 (or imp	risoned	not les	tory. s than :	renaltie 30 days	s: Port , or bot	en not h for e	iess that ach viol	n 510 f ation.	юг
Each c	lay of c	ontinue	d viola	tion is a separ	ate offense, pursuant to	ss 144.99	and 1	62.06	, Wis. S	Stats.		-					

State o Depar	of Wisco tment of	onsin f Natur	al Reso	Route To:	Vaste ency Response	□ H □ U	laz. V Inder	Waste ground	l Tanks			SOI For	L BOR m 4400	ING L0 -122	OG INF	ORMA	ATION 7-91
					vater		Vater Other	Resou	rces					Pag	e 1	of	1
Facilit	y/Projec	ct Nam	e E				Lice	ense/Pe	ermit/M	onitorir	ng Nun	nber	Boring	Numb	er		
Dry Boring	clean	USA	Facili irm nar	ty ne and name of crew chie	ef)		Date	Drill	ng Star	ted	Date	Drillin	SB-2	nleted	Drillin	o Met	hod
On-	Site E	nviroi	nment	al/Denny Totske	/			4	30/97		2.41	4/3	30/97		Soilr	robe	
TIND	Continue	117.511 N			ommon Woll N	ama	Fine	I Stati	Weter	Louol	Curf	hee Eler	votion		lomboli	Diam	oton
DINA	raciiny	weu w	10. W	t Omque wen No.	ommon wen iv	ame	гша	ii Stati	e water Fee	t	Suri	ace Ele	Feet	B	orenoie	2.0	Inches
Boring	g Locatio	on		NI	E av			Lat	0 1 11		Loc	al Grid	Locatio	n (If ap	plicabl	e)	
State	Plane 1/4 (of	1/4	4 of Section T	, E S/U N.R	C/N	I.	ong	0 ' "			Fe	et 🗌	N S		Feet	□ E □ w
Count	y j				D	NR Cou	inty (Code	Civil T	own/Ci	ity/ or	Village					
Wat	ukesha		I	1					Broo	kfield		T	Soil	Drope	rtiec		1
					D		i										-
	(i p	unts	Fee	Soil/Rock	Description	۱r						E E					ts
lber	th ()	, Co	h In	Each M	lajor Unit	Л		СS	hic	ram	FID	lard trati	ent	t id	t	0	o/
Mum	Leng	Blow	Dept					C S	Grap Log	Well Diag	PID/	Stand	Mois	Lini	Plast	P 20	Com
				(concrete)					$\overline{\mathbb{X}}$								
_				FILL, crushed stone a	nd sand		-7		\bigotimes								
1	24																
			-2						\bigotimes								
2	8																
									\bigotimes								
3	24		-5					CL									
				CLAY, silty, trace fine	e to coarse grain	ned											
			6 -	,,,,, .													
			,														
		:															
I heret	by certif	y that t	he info	rmation on this form is tr	ue and correct	to the be	est of	my kr	lowledg	e.							
<u>.</u>									IVICLA Brookfi	ren/H eld, Wi	art isconsi	n					
	<u> </u>			1			•		Tel: 41	4-790-1	974,	Fax: 41	4-790-	1989			
This for more t	orm is au han \$5,0	uthoriz 000 for	ed by C · each v	Chapters 144, 147 and 162 iolation. Fined not less t	2, Wis. Stats. (han \$10 or mor	Completine than \$	ion o 5100 (of this i or imp	report is risoned	manda not less	tory. s than :	Penaltie 30 days	s: Forf , or bot	eit not h for e	less tha ach viol	n \$10 i ation.	nor
Each d	lay of co	ontinue	d violat	tion is a separate offense,	pursuant to ss	144.99 a	and 1	62.06	, Wis. S	stats.		-					

Sector sector sector

and the second sec

Never and American American

The second second

State o Depar	of Wisco tment of	onsin f Natur	al Reso	Purces	oute To: Solid Was Emergenc	te y Respon	se 🗆 U	laz. V Jnder;	Waste ground	l Tanks			SOI For	L BOR m 4400	ING LO -122)G INF	ORMA	TION. 7-91
				L_	⊔ Wastewate	er		Vater Other	Resou	rces					Pag	e 1	of]	L
Facilit Dry	y/Proje clean	ct Nam USA	e Facili	ty				Lice	ense/Pe	ermit/M	onitorir	ig Nur	nber	Boring SB-3	, Numb	er		
Boring	g Drilled	i By (F	irm naı	ne and name of	crew chief)			Date	e Drilli	ng Star	ted	Date	e Drillin	ng Com	pleted	Drillin	g Meth	ıod
On-	Site E	nviro	nment	al/Denny Tot	ske				4/	30/97			4/3	30/97		Soilp	robe	
DNR	Facility	Well N	ło. W	I Unique Well N	lo. Com	mon Well	l Name	Fina	al Stati	c Water	Level	Surf	ace Ele	vation	В	orehole	Diame	eter
Boring	z Locati	on								Fee	t	Loc	al Grid	Feet Locatio	n (If ar	plicable	$\frac{2.0 \text{ I}}{(e)}$	nches
State	Plane				N,	E s	S/C/N		Lat	0 ' "					N	r	[ΞE
Count	1/4	of	1/-	4 of Section	T	N,R	DND Co		ong	" ' 0	aun/C		Fe	et 🗌	S]	Feet [] w
Wa	^y ukesha	L					DINK CO	unity (Coue	Broo	kfield	ty/ or	vinage					
Sar	nple					ini.		Ī						Soi	Proper	ties		
		ts	set	Soi	il/Rock D	escriptio	on											
L	(in) red	uno	n Fe	And	Geologic	Origin	For		-		я	Δ	d tion	e _				ints
mbe	igth	N C	pth I		Each Maj	or Unit			Ű	phic 2	ll grai	/FI	ndar letra	istur	uid	stic	8	D/
	Lei Re	Blo	De						Ď	Lo Gr	We Dia	PIL	Sta	ŠΩ	Lin	Pla Lin	P 2	နည်
				(concrete)				_										
ı 🗖	24		-1	FILL, crushed	1 stone and s	sand												
1	24		-							\otimes								
			-2															
			Ē															
2	20																	
			E _4															
			È.	CLAY, silty,	trace fine to	coarse gi	rained		CL									
3	12		-5	sand, brown,	dry.													
5	12		F															
			-6															
I here	by certif	fy that	the info	rmation on this	form is true	and corre	ct to the b	est of	mv kr	lowledg	e.		<u>l</u>	I	L	I		<u>I</u>
Signat	ure							Firm		McLa	ren/H	art						
										Brookfi	eld, Wi	sconsi	n For 41	14 700	1000			
This fo	orm is a	uthoriz	ed hv (Chapters 144 14	7 and 162	Wis State	. Complet	tion o	of this	report is	4-790-1 manda	9/4, 	rax: 41 Penaltie	14-790-	eit not	ess the	n \$10 -	
more t	han \$5,0	000 for	each v	violation. Fined	not less than	1 \$10 or n	nore than S	\$100	or imp	risoned	not less	than 1	30 days	, or bol	h for ea	ich viol	ation.	101
Each d	lay of co	ontinue	d viola	tion is a separate	e offense, pu	rsuant to	ss 144.99	and 1	162.06	, Wis. S	stats.							

gildenseedings a communities

State o Depart	of Wisco tment of	onsin f Natur	al Reso	urces [Route To: Solid Wa Emergen	ste cy Respon	□ H se □ U	laz. ` Jndei	Waste rground	l Tanks			SOI For	L BOR m 4400	ING LO -122)G INF	ORMA	TION 7-91
				[UWastewa	ter		Vater	Resou	rces					Dee		a f 1	1
Facilit	y/Proje	ct Nam	e					Lic	ense/Pe	ermit/M	onitorii	ng Nun	nber	Boring	, Numb	er er		
Dry	clean	USA	Facili	ty					D 11	0	. 1		D '11'	SB-4		ID '11'		
Boring	Site E	nviroi	nm nar	al/Denny To	tske			Dat		ing star	tea	Date		ig Com	pieted	Drillin	.g Metr	100
_									4/	30/97			4/3	50/97		Soup	robe	
DNR	Facility	Well N	lo. W	I Unique Well]	No. Cor	nmon Well	l Name	Fin	al Stati	c Water Fee	· Level	Surf	ace Ele	vation Feet	B	orehole	Diame	eter
Boring	g Locati	on			NT			 	Lot	0 ! "		Loca	al Grid	Locatio	on (If ap	plicabl	$\frac{2.0}{e}$	
State	Plane	of	1//	1 of Section	N, T		S/C/N	T	Lai	0 1 1			Fe		N S		[Feet [
Count	y		1/-	+ or section	L	N,K	DNR Co	unty	Code	Civil T	Cown/C	ity/ or	Village					VV
Wa	ukesha	l I	F	1					1	Broo	kfield		1			<u>.</u>		Т
San	npie													Sol	Prope	Ties		-
	Э'n	ints	Feet	Sc	il/Rock E	Descriptio	on						L L					s
ber	h (ii vere	Con	n In	And	Geologic	ior Unit	For		S	lic	am	D IF	ard ratio	ure	-p	ى د		/ nent
Ium	engl	low	Depti		Luch Mu	jor one) S (jrapl og	Vell Diagr	ID/I	tand	Aois	init.	lasti limit	200	
		щ		(concrete)							20	<u> </u>	N T	20				
			Ē,	FILL crushe	d stone and	sand												
1	24		Ē		a stone and	Sund												
			E															
2	8		-3														ł	
									CL									
				sand, brown,	dry.	o coarse gi	rained											
3	24		Ē															
			-6															
			E															
			-7															
			-															
 I herek	V certif	v that t	he info	rmation on this	form is true	and corre	et to the b	est o	f mv kr	owleda	P		<u> </u>		l	<u> </u>		<u> </u>
Signat	ure	y mai i						Firm	i iiiy Ki	McLa	ren/H	art						
-										Brookf	ield, W	isconsi	n	4 700	1000			
This fo	orm ie o	uthoriz	ed by C	hanters 144 1	17 and 162	Wis State	Comple	tion	of this	1 el: 41	4-790-1	9/4,	Fax: 41	4-790-	1989 eit not	less the	n \$10 •	
more t	han \$5,0	000 for	each v	iolation. Fined	not less that	in \$10 or n	nore than !	\$100 \$100	or imp	risoned	not les	s than i	30 days	, or bot	th for each	ach viol	ation.	101
Each d	lay of co	ontinue	d violat	tion is a separat	e offense, p	ursuant to	ss 144.99	and	162.06	, Wis. S	stats.							

85719g

in a state of the state of the

State o Depart	f Wisco ment of	nsin Natur	al Reso	urces C	oute To:] Solid Was] Emergenc	ste sy Respons	□ F se □ t	łaz. V Jnder	Waste ground	Tanks			SOI For	L BOR n 4400	ING LO -122)G INF	ORMA	TION 7-91
] Wastewate	er		Water	Resou	rces					Dag	ه 1	of	1
Facilit	y/Projec	t Nam USA	e Facili	tv				Lice	ense/Pe	rmit/M	onitorin	g Nun	nber	Boring	Numbe	er		L
Boring	Drilled	By (F	irm nar	ne and name of c	rew chief)			Date	e Drilli	ng Star	ed	Date	Drillin	g Com	pleted	Drillin	g Metl	nod
On-	Site Ei	nviroi	nment	al/Denny Tot	ske				4/	30/97			4/3	80/97		Soilp	robe	
DNR I	acility	Well N	lo. W	I Unique Well N	o. Com	imon Well	Name	Fina	al Stati	c Water Fee	Level t	Surf	ace Ele	vation Feet	В	orehole	Diam 2.0 J	eter Inches
Boring	Locatio	on	0000000 00000		N	E 0			Lat	0 ' "		Loca	al Grid	Locatio	n (If ap	plicabl	e)	
State	1/4 c	of	1/4	4 of Section	T	N.R	b/C/N	L	ong	0 ' "			Fe	et 🗌	N S		l Feet [
County	/ ikacha						DNR Co	unty (Code	Civil T	'own/Ci	ty/ or	Village					
San	nple	•								BIOU	KIICIU			Soi	Proper	ties		
Number	ength (in) kecovered	slow Counts	Depth In Feet	Soi And J	l/Rock D Geologic Each Maj	escriptic Origin or Unit	on For		JSCS	Jraphic 	Vell Diagram	ID/FID	Standard Senetration	Moisture Content		olastic Limit	200	RQD/ Comments
				(concrete)							~ 1			20				
1	24			FILL, crushed	l stone and	sand												
2	20		-3															
3	12		-5	CLAY, silty, sand, brown, o	trace fine to dry.) coarse gi	rained											
I heret Signat	by certif	y that	6	rmation on this 1	form is true	and corre	ect to the b	pest of	f my kı	nowledg	e.							
Signat	ure							Firm		McLa Brookfi Tel: 41	ren/H ield, Wi 4-790-1	art isconsi 974,	n Fax: 4	14-790-	1989			
This for more t Each d	orm is a han \$5,0 ay of co	uthoriz 000 foi ontinue	ed by C each v d viola	Chapters 144, 14 violation. Fined tion is a separate	7 and 162, not less that offense, p	Wis. Stats n \$10 or n ursuant to	s. Comple nore than ss 144.99	tion of \$100 and 1	of this or imp 162.06	report is risoned , Wis. S	s manda not less Stats.	tory. s than	Penaltie 30 days	es: For , or bo	feit not th for e	less tha ach vio	n \$10 ation.	nor

\$77575B

and the second se

State o Depart	of Wisco tment of	onsin f Natur	al Reso	Purces	oute To: Solid Waste Emergency Respons Wastewater	se 🗆 U	laz. V Inder Vater	Waste ground Resou	l Tanks rces			SOI For	L BOR m 4400	ING L -122	OG INF	ORM/	ATION 7-91
Facilit	v/Proje	ot Nom)ther	anco/D	mit/M	onitorir	a Nue	ahor	Poring	Pa	ge 1	of	1
Dry	clean	USA	e Facili	ty			Lice	elise/Pe	:11111/ IVI	onnorn	ig Null	liber	SB-6	, i	ber		
Boring	Drilled	I By (F	irm naı	ne and name of c	rew chief)		Dat	e Drilli	ing Star	ted	Date	e Drillir	ig Com	pleted	Drillir	ng Met	hod
	Site Ei	nviroi	nment	al/Denny 1 ot:	ske			4/	'30/97			4/3	80/97		Soilp	orobe	
DNR	Facility	Well N	io. W	I Unique Well N	e. Common Well	Name	Fina	al Stati	c Water Fee	[.] Level t	Surf	ace Ele	vation Feet	[]	Borehole	e Diam 2.0	eter Inches
Boring	g Locatio	on			NES			Lat	0 ' "		Loc	al Grid	Locatio	on (If a	pplicabl	e)	
State	1/4 o	of	1/-	4 of Section	T N,R	i cin	L	long	0 ' "	1		Fe	et 🗌	N S		Feet	$\square \mathbf{W}$
County	y ikesha					DNR Cou	unty	Code	Civil T	own/Ci kfield	ity/ or	Village					
Sar	nple					<u> </u>			DIOU				Soi	l Prope	rties		Γ
		S	Gt	Soi	Rock Descriptio	n											
L	red (in)	ount	n Fe	And	Geologic Origin	For		~		E	٥	d tion	9				nts
umbe	ength	ow C	epth I	F	Each Major Unit			SCS	raphic og	ell iagrar	D/FI	andar	oistur	quid	astic	200	QD/
Ź	٦æ	BI	Ā					D	L G XXX	≥ä	Id	2 2 2 2	ΣŬ	בב	E E	4	<u> </u>
			F.	(concrete) FIL L crushed	stone and sand												
1	24		Ē		stone and said												
			-2														
			Ē														
2	20		-3														
				CLAY, silty, t	race fine to coarse gr	ained		CL									
3	12		-5	sand, brown, c	lry.												
							-										
			-6														
 I herei	v certif	v that i	the info	rmation on this f	orm is true and correc	ct to the be	est of	f mv kr	owleda	re							
Signat	ure	y mat l					Firm	L IIIY KI	McLa	ren/H	art						
									Brookfi Tel: 41	ield, Wi 4-790-1	isconsi 974,	n Fax: 41	14-790-	1989			
This fo	orm is a	uthoriz	ed by C	Chapters 144, 147	and 162, Wis. Stats	. Complet	tion o	of this i	report is	s manda	tory.	Penaltie	s: Forf	feit not	less tha	n \$10	nor
Each d	lay of co	ontinue	d viola	tion is a separate	offense, pursuant to	ss 144.99	and 1	162.06	, Wis. S	fot less Stats.	s man .	so days	, UF DOI	ui tor e	ach Vio	iation.	

1.00

.

State o Depart	of Wisco ment of	onsin Natur	al Reso	urces	Route To: Solid Wa Emergen	aste acy Respons	se 🗆 U	laz. V Inder	Waste rground	l Tanks			SOI For	L BOR n 4400	ING LO -122	OG INF	ORMA	ATION 7-91
						liter)ther	Resou	1003					Pag	e 1	of	1
Facilit Dry	y/Projec clean	et Nam USA	e Facili	ty				Lice	ense/Pe	ermit/M	onitorir	ng Nun	nber	Boring SB-7	Numb	er		
Boring	Drilled	By (F	'irm nar	ne and name o	f crew chief)		Dat	e Drilli	ng Star	ted	Date	Drillin	g Com	pleted	Drillin	ig Met	hod
On-	Site E	nviroi	nment	al/Denny To	otske				4/	30/97			4/3	80/97		Soilp	robe	
DNR I	Pacility	Well N	ło. W	I Unique Well	No. Co	mmon Well	Name	Fin	al Stati	c Water Fee	Level	Surf	ace Ele	vation Feet	B	orehole	Diam	ieter Inches
Boring	Locatio	on			N	F s			Lat	0 ! "		Loca	al Grid	Locatio	on (If ap	plicabl	e)	
State	1/4 e	of	1/4	4 of Section	T,	N,R	n ch	I	Long	0 ' "			Fe	et 🗌	N S		Feet	$\Box \mathbf{w}$
County	y 1kesha						DNR Co	unty	Code	Civil 1 Broo	`own/Ci kfield	ity/ or	Village					
San	nple						1							Soil	Prope	rties		
		ts	eet	S	oil/Rock I	Descriptio	on											
ĸ	(in) ered	Coun	In F	An	d Geologi	c Origin	For		s	J	в	9	ation	ure ut				ents
umbe	ength) wo	epth		Each Ma	ajor Unit			sc	raphi og	'ell iagra	D/F	anda	oistu	iquid	astic	200	QD/
<u>Z</u>	<u>7</u> x	BI	<u> </u>						D		≥D	-Id	N A	ΣŬ			<u> </u>	<u> a</u> ŭ
				(concrete) FILL crush	ed stone and	l sand			-									
1	18		Ē		ou stone une	June												
			-2															
			È.															
2	6		3 															
	1		F -4							¥XX								
[here!	V certif	v that	the info	mation on thi	s form is tru	e and corre	et to the h	est o	f mv k	l	le le							
Signat	ure	y ulat						Firm	1 1119 KI	McLa	ren/H	art						
										Brookf	ield, W 4-790-1	isconsi 974	n Fax: 4	4-790-	1989			
This fo	orm is a	uthoriz	ed by (Chapters 144,	47 and 162	, Wis. Stats	. Comple	tion	of this	report i	s manda	tory.	Penaltie	s: For	feit not	less tha	n \$10	nor
more t Each d	han \$5,0 lay of co	000 for ontinue	r each v ed viola	violation. Fine tion is a separa	d not less th te offense,	an \$10 or r pursuant to	nore than S ss 144.99	\$100 and	or imp 162.06	risoned	not les: Stats.	s than	30 days	, or bo	th for e	ach vio	lation.	

State o Depart	f Wisco ment of	onsin Natura	al Reso	Ro urces	ute To: Solid Waste Emergency Respon Wastewater	se U	laz. V Inder Vater	Waste ground Resou	Tanks rces			SOI For	L BOR m 4400	ING L0 -122)G INF	ORMA	ATION 7-91
Facilit	W/Droige	at Nom					ther	neo/D	mait/NA	anitarir	a Num	ahor	Doring	Pag	;e 1	of J	1
Dry	clean	USA 1	e Facili	ty			Lice	inse/Pt	:11111/1 VI	onitorii	ig inun	ider	SB-8	, Nume	er		
Boring	Drilled	By (F	irm nar	ne and name of c	rew chief)		Date	e Drilli	ng Star	ted	Date	Drillin	g Com	pleted	Drillin	g Meth	nod
On-	Site Ei	nviror	nment	al/Denny Tots	ke			4/	30/97			4/3	80/97		Soilp	robe	
DNR	³ acility	Well N	io. W	I Unique Well No	Common Wel	l Name	Fina	al Stati	e Water Fee	Level t	Surf	ace Ele	vation Feet	E	orehole	Diame	eter Inches
Boring	Locatio	on			NEG			Lat	0 ! "		Loca	al Grid	Locatio	on (If a	oplicable	e)	
State	1/4 c	of	1/4	4 of Section	T N,R	S/C/N	L	ong.	0 ' "			Fe	et 🗌	N S		L Feet [⊥ E ⊐ W
Count	/ 1kesha					DNR Cou	unty (Code	Civil T Broo	'own/Ci kfield	ty/ or	Village					
San	nple					1	1						Soil	Prope	rties		
		S	çt	Soil	/Rock Description	on											
L	red (j)	uno	n Fe	And (Geologic Origin	For				ц	Δ	d	9				nts
umbe	ngth cove	ow C	pth I	E	ach Major Unit			SCS	aphic g	ell agrar	D/FI	ndar netra	Distur	quid	nit	8	D/
	RE	Ble	De					D	53	Die	IIId	Sta	žΰ	ĒĔ	Lii Lii	<u>A</u>	20
			Ē	(concrete)													
1	24		1 	FILL, crushed	stone and sand												
			-2														
2	8		-3					CL		•							
			-4	CLAY silty to	race fine to coarse g	rained											
3	24		-5	sand, brown, d	ry.												
5	24											-					
			-6														
			-														
			,														
																I	
I here!	v certif	v that t	he info	rmation on this fo	orm is true and corre	ct to the be	est of	mv kr	owleda	e							
Signat	ure	, mai i					Firm	My KI	McLa	 ren/H	art						
									Brookfi Tel: 41	eld, Wi 4-790-1	sconsi 974	n Fax: 41	4-790-	1989			
This fo	orm is au	uthoriz	ed by C	Chapters 144, 147	and 162, Wis. Stats	6. Complet	tion o	of this 1	report is	manda	tory.	Penaltie	s: Forf	eit not	less that	n \$10 r	nor
more t Each d	han \$5,0 ay of co	000 for	each v d violat	iolation. Fined n tion is a separate	ot less than \$10 or r offense, pursuant to	nore than \$ ss 144.99	\$100 (and 1	or imp 162.06	risoned , Wis. S	not les: Stats.	than (30 days	, or bot	h for e	ach viol	ation.	

State o Depar	of Wisco tment of	onsin Natur	al Reso	ources	Route To: Solid Waste Emergency Respon Wastewater	se] Haz] Und] Wat	. Waste erground er Resou	Tanks			SOI Fori	L BOR n 4400	ING LC -122	OG INF	JRMA	TION 7-91
] Othe	er er	1003					Pag	e 1	of 1	
Facilit Drv	ty/Projec /clean	et Nam USA	e Facili	tv			Li	icense/Pe	ermit/M	onitorir	ng Nun	nber	Boring	Numb 1	er		
Boring	g Drilled	By (F	irm nar	ne and name o	f crew chief)		D	ate Drill	ng Star	ted	Date	e Drillin	g Com	pleted	Drillin	g Meth	od
On-	site Er	iviror	nmenta	al/Denny To	otske			1/	10/98			1/1	0/98		Soilp	robe	
DNR	Facility	Well N	ŧo. ₩	I Unique Well	No. Common Wel	l Name	Fi	inal Stati	c Water	Level	Surf	ace Ele	vation	В	orehole	Diame	eter
Boring		 on							Fee	t	Loc	al Grid	Feet Locatio	n (If ar	plicable	$\frac{2.0 \text{ I}}{2}$	nches
State	Plane				N, E 8	S/C/N		Lat	0 ' "					N	1	Ē	E
Count	1/4	of	1/4	4 of Section	T N,R		Count	Long		Cowp/C	ty/or	Fe	et 🗌	S]	Peet [W
Wa	y ukesha						County	y Coue	Broo	kfield	ity/ 01	v mage					
Sar	nple				******							ļ	Soil	Proper	ties		
		ts	eet	s	oil/Rock Description	on											
L	(in) red	oun	n F	An	d Geologic Origin	For		S	0	я	D	d	e _				ants
mbe	ngth	N N	pth]		Each Major Unit			C	aphi g	ill Agrai	J/FI	ndar netra	oistu nten	nit	stic nit	8	
N	Re	BIG	De					Ď	ËŜ	Ve Dia	IId	Sta Per	žŐ	Ľ.	Pla Lir	P 2	2°S
				(concrete)				7									
1	24		-1	FILL, crush	ed stone												
1	27								\bigotimes								
			2	SILT, clave	v, some fine to coarse	grained		ML	КХХХ								
			Ē,	sand, browr	n, dry.	0											
2	20		Ē	CLAY, silty	, trace fine to coarse g	rained		CL									
			E_4	sand, browr	n, dry.												
			Ē														
3	12		5														
																1	
			-6														
																1	
I herel	by certif	y that	the info	rmation on thi	s form is true and corre	ect to the	e best	of my ki	lowledg	e.		<u> </u>		l			L
Signat	ure						Fir	m	McLa	ren/H	art						
									Brookf	ield, W	isconsi 974	n Fax∙⊿	4.700-	1980			
This fo	orm is a	uthoriz	ed by (Chapters 144.	147 and 162, Wis. Stats	s. Com	pletior	n of this	report is	s manda	tory.	Penaltie	s: Forf	eit not	less that	n \$10 r	nor
more t Each d	than \$5,0 tay of co	000 for	r each v d viola	violation. Fine	d not less than \$10 or rate offense, pursuant to	more that	an \$10 99 and	0 or imp d 162.06	risoned Wis	not les: Stats	s than :	30 days	, or bot	h for e	ach viol	ation.	

State o Depar	of Wisco tment of	onsin f Natur	al Reso	Ro urces	ute To: Solid Waste Emergency	e Respons	ie 🗌 l	laz. V Jnder	Waste ground	l Tanks			SOI Fori	L BOR n 4400	ING LC -122	G INF⁴	ORMA	ATION 7-91
					Wastewater			Water Other	Resou	rces					Pag	e 1	of	1
Facilit Dry	y/Project clean	ct Nam USA	e Facili	ty				Lice	ense/Pe	ermit/M	onitorir	ig Nun	nber	Boring SB-1	Number 2	er		
Boring	g Drilled	l By (F	irm nar	ne and name of ci	rew chief)			Date	e Drilli	ng Star	ted	Date	Drillin	g Com	pleted	Drillin	g Meth	hod
On-	site Er	iviror	imenta	al/Denny Tots	ke				1/	10/98			1/1	0/98		Soilp	robe	
DNR	Facility	Well N	lo. W	I Unique Well No	o. Comm	ion Well	Name	Fina	al Stati	c Water Fee	t Level	Surf	ace Ele	vation Feet	В	orehole	Diam 2.0	eter Inches
Boring	g Locatio	on			N 1	F s			Lat	0 ' "		Loc	al Grid	Locatio	n (If ap	plicable	e)	
State	1/4 e	of	1/4	4 of Section	T, T	N,R			ong	0 ' "			Fe	et 🗌	N S]	ا Feet آ	
Count	y ukesha						DNR Co	unty (Code	Civil T	`own/Ci kfield	ty/ or	Village					**********
Sar	nple		I				l			Dice				Soil	Proper	ties		Τ
umber	ength (in) ecovered	ow Counts	epth In Feet	Soil And C E	/Rock Des Geologic C Each Majos	scriptic Drigin 1 r Unit	on For		SCS	raphic og	ell iagram	D/FID	andard	oisture ontent	quid mit	astic mit	200	QD/ omments
Ź	R L	BI	<u>ă</u>						D	5 XXX	≥ã	Ы	<u>v</u> v	ΣŬ		БIJ	<u> </u>	
1 2 3	24 24 24		-1 -2 -3 -4 -5 -6 -7	(concrete) FILL, crushed SILT, clayey, s sand, brown, d CLAY, silty, tu sand, brown, d	stone some fine to ry. race fine to c ry.	coarse g	rained		ML									
I herel	by certif	y that	the info	rmation on this fo	orm is true a	nd corre	ct to the b	est of	f my kı	nowledg	e.	~ **						
Jiginat	ut v									MCLa Brookf Tel: 41	iren/H ield, W 4-790-1	art isconsi .974,	n Fax: 4	14-790-	1989			
This for more the Each co	orm is a han \$5, lay of co	uthoriz 000 foi ontinue	ed by C r each v d viola	Chapters 144, 147 riolation. Fined n tion is a separate	and 162, W not less than offense, pur	is. Stats \$10 or n suant to	. Comple nore than ss 144.99	tion c \$100 and 1	of this or imp 162.06	report is risoned , Wis. S	s manda not les: Stats.	tory. s than	Penaltie 30 days	es: Forf , or bo	feit not th for ea	less tha ach viol	n \$10 ation.	nor

.

State o Depart	f Wisco ment of	onsin Matur	al Reso		ite To: Solid Was Emergenc Wastewate	te y Respons er	se 🗆 1	Haz. V Under Water	Waste ground Resou	Tanks rces			SOI For	L BOR m 4400	ING LC -122)G INF	ORM	ATION 7-91
Facility		A Nom				-		Other	maa/Da		anitarin	a Mun	ahar	Doring	Pag	e 1	of	1
Dry	y/Projec clean	CUNAM	e Facili	tv				Lice	ense/Pe	rmit/M	onitorin	g Nun	nber	Boring	Number 3	er		
Boring	Drilled	By (F	irm nan	ne and name of cre	ew chief)			Dat	e Drilli	ng Star	ted	Date	Drillin	g Com	pleted	Drillir	ig Met	hod
On-	site Er	viror	menta	al/Denny Totsk	æ				1/	10/98			1/1	0/98		Soilp	orobe	
DNR I	acility	Well N	lo. W	I Unique Well No	Com	mon Well	Name	Fina	al Statio	Water Fee	Level t	Surf	ace Ele	vation Feet	B	orehole	• Diam 2.0	ieter Inches
Boring	Locatio	on			NT	Г.,		 	Lat	0 ! "		Loca	al Grid	Locatio	n (If ap	plicabl	e)	
State I	Plane	- £	1 /	A of Section	N, T		5/C/N	1	Lai	0 ! "			Ea		N		East	
County	1/4 (or	1/2	4 of Section	1 	N,K	DNR Co		Code	Civil T	`own/Ci	tv/ or	Village		3		reel	
Wai	ikesha							, and j	0040	Broo	kfield	<i>.</i> ,						
San	nple						***********							Soil	Proper	ties		
lumber	ength (in) tecovered	low Counts	Jepth In Feet	Soil/ And G Ea	Rock D eologic ach Maj	escriptio Origin or Unit	on For		JSCS	Jraphic .og	Vell Diagram	ID/FID	tandard enetration	Aoisture Content	iquid	lastic	200	tQD/ Comments
		щ							ר		20	<u> </u>	P S	20				
1 2 3	24 8 24		-1 -2 -3 -4 -5 -6 -7	(concrete) FILL, crushed s SILT, clayey, so sand, brown, dr CLAY, silty, tra sand, brown, dr	ome fine t y. ace fine to y.	o coarse g	grained		ML CL									
			Ļ	L	•													
I hereb	y certif	y that	the info	rmation on this for	rm is true	and corre	ect to the b	best of	f my kr	owledg	e	·						
Signat	ure							Firm		McLa Brookfi Tel: 41	ren/H ield, Wi 4-790-1	art sconsi 974,	n Fax: 41	14-790-	1989			
This for more the Each d	orm is a han \$5, ay of co	uthoriz 000 foi ontinue	ed by C r each v d violat	Chapters 144, 147 riolation. Fined no tion is a separate o	and 162, ' ot less that offense, pu	Wis. Stats n \$10 or n irsuant to	Comple nore than ss 144.99	etion o \$100 and	of this 1 or imp 162.06	report is risoned , Wis. S	s manda not less Stats.	tory. s than i	Penaltie 30 days	es: Forf , or bot	feit not	less tha ach vio	in \$10 lation.	nor

State o Depart	of Wisco tment of	onsin Natur	al Reso	urces	Route To: Solid Waste Emergency Respon		Haz. Under	Waste rground	l Tanks			SOI For	L BOR m 4400	ING LO -122)G INF	ORMA	ATION 7-91
					U Wastewater		Water	r Resou	rces					Рал	е 1	of	1
Facilit	y/Projec	et Nam	e				Lic	ense/Pe	ermit/M	onitorii	ng Nun	nber	Boring	Numb	er	01 .	L
Dry	clean	USA	Facili	ty									SB-1	4			
Boring	Drilled	l By (F	irm nar	ne and name	of crew chief)		Dat	te Drill	ing Star	ted	Date	e Drillin	ig Com	pleted	Drillin	g Metl	nod
OII-	She Ei	IVILUI	unenta		OISKE			1/	/10/98			1/1	0/98		Soilp	robe	
DNR	Facility	Well N	ło. W	I Unique We	II No. Common Wel	l Name	Fin	al Stati	c Water	Level	Surf	ace Ele	vation Feet	B	orehole	Diam	eter Inches
Boring	, Locatio	on					 	. .	0 ! "		Loca	al Grid	Locatio	n (If ap	plicabl	e)	menes
State	Plane	- 6	1 (4 of Continu	N, E S	S/C/N		Lat	0 ' "			r -		N		[[
Count	y 1/4 (1/2	+ of Section	I N,K	DNR Co	unty	Code	Civil T	own/C	ity/ or	Village		3			w
Wai	ıkesha		·	1				·····	Broo	kfield	_	-					
San	nple												Soil	Proper	ties	r	-
		nts	feet		Soil/Rock Descripti	on											
ы	t (in ered	Cour	Ш Н		nd Geologic Origin	For		S	c	в	Ð	rd atio	It e				ents
qui	ngth	0 MO	pth		Each Major Unit			sc	aph	ell agra	D/F	netr	oistu	quid	astic	00	ja m
<u>ž</u>	Rec	BI	ă_					D	53	Di W	Id	St: Pe	Σŭ	ĒĒ	Li	<u> </u>	<u>X S</u>
1	24		F	FILL, clay	yey silt, some to little fin	e to											
-			-1	coarse gra	med sand, dark brown, r	noist.			\bigotimes								
2	18		-2	CT AV -				CL									
			Ē	sand and g	ravel, brown, moist.	rained											
																[
			E_4														
3	24		Ę					l									
			-5														
			F														
4	24		-6														
·	2.		E														
			-7														
			Ē														
			-8														
I hereb	by certif	y that I	the info	rmation on th	nis form is true and corre	ect to the b	est o	f my kr	nowledg	е.							
Signat	ure						Firm	1	McLa	ren/H	art	-					
									Tel: 41	4-790-1	974,	n Fax: 41	4-790-	1989			
This fo	orm is a	uthoriz	ed by C	hapters 144,	147 and 162, Wis. State	s. Comple	tion	of this	report is	manda	tory.	Penaltie	s: Forf	eit not	less that	n \$10 ı	nor
Each d	nan 55,0 lay of co	ontinue	each v d violat	tion is a sepa	rate offense, pursuant to	ss 144.99	and	or imp 162.06	, Wis. S	not les: Stats.	s man .	oo aays	, or doi	ii for ea	icn viol	ation.	

State o Depart	of Wisco tment of	onsin f Natur	al Reso	urces	Route To:	iste cy Respon	se 🗆 U	łaz. V Jnder	Vaste ground	l Tanks			SOI For	L BOR m 4400	ING LO -122)G INF	ORMA	TION 7-91
					U Wastewa	iter		Water	Resou	rces					-	1	. 1	
Facilit	v/Projec	et Nam	e					Other	nse/Pe	ermit/M	onitoria	ng Nun	ober	Boring		e l	of 1	
Dry	clean	USA	Facili	ty										SB-1	5			
Boring	Drilled	l By (F	irm nar	ne and name	of crew chief)		Date	e Drill	ing Star	ted	Date	e Drillin	g Com	pleted	Drillin	g Meth	od
On-	site Er	iviron	menta	al/Denny T	otske				1/	10/98			1/1	0/98		Soilp	robe	
DNR I	Facility	Well N	lo. W	I Unique We	II No. Coi	mmon Well	l Name	Fina	l Stati	c Water Fee	Level	Surf	ace Ele	vation Feet	B	orehole	Diame 2.0 I	eter nches
Boring	Locatio	on				-		 	.	0 1 1		Loca	al Grid	Locatio	on (If ap	plicable	e)	
State	Plane 1/4 (of	1/4	4 of Section	N, T	E S	S/C/N		Lat	0 ' "			Fe	et 🗌	N S	1	[Feet [∃ E ∃ W
County	y						DNR Co	unty (Code	Civil T	own/C	ity/ or	Village					
Wai San	ikesha		r	I						Broo	kfield		1	Soil	Prope	rties		1
								ŀ						501				
	С.	ints	Feel		Soil/Rock I	Descriptio	on	·					E.					s
er	h (i) 'ere	Cot	Ч		nd Geologie	c Origin	For	ļ	S	lic	am	Ũ	ard	ure	-	0		Jent
lum	engt	low	epth		Lach Ma	gor onn			S	raph og	/ell iagr	ID/I	tand	loist	imit	lasti imit	200	QD DIII
$\frac{2}{1}$	<u> </u>	<u></u>			*1.	. 171 6					20	<u> </u>	N C	20			_ <u>A</u>	N O
				coarse grai	ey silt, some ned sand, dar	to little find	e to noist.			\bigotimes								
			Ė,														ĺ	
2	18		F	CLAY, sil	ty, trace fine t	to coarse gi	rained		CL									
			-3	sand and g	ravel, brown,	moist.												
3	24		-4															
5	24		È	(0.1 foot s	and seam at 4	.5 feet, wet	t)											
			-5															
			Ē															
4	24		E 6															
			- -														i ſ	
			F'														I	
			-8														I	
			-														I	
																	l	
																	1	
																	1	
																	1	
I hereb	V Certif	v that t	he info	rmation on th	us form is true	e and corre	et to the b	est of	mv kr		<u>е</u>		l					
Signati	ure	Julai	are mito					Firm	IIIY KI	McLa	ren/U	art					<u></u>	
-										Brookf	ield, W	isconsi	n					
	•			NI . -	1 477 1	W. C			C	Tel: 41	4-790-1	974,	Fax: 41	4-790-	1989			
This for more the	orm is au han \$5.0	uthoriz 200 for	ed by C r each v	Inapters 144, violation. Fir	147 and 162, ed not less the	, Wis. Stats an \$10 or n	5. Complete nore than S	tion o \$100 (of this : or imp	report is risoned	s manda not les:	tory. s than 1	Penaltie 30 davs	s: Forf , or bot	eit not h for e	less thai ach viol	n \$10 n ation.	or
Each d	ay of co	ontinue	d viola	tion is a sepa	rate offense, p	oursuant to	ss 144.99	and 1	62.06	, Wis. S	Stats.							

State o Depart	of Wisco tment of	onsin Natur	al Reso	Route To urces): Waste	Пн	1a7 V	Vaste				SOI	L BOR	ING LO	OG INF	ORMA	TION 7-91
					gency Respon	ise 🗌 U	Jnder	ground	Tanks			1 011		122			, ,,
					ewater		Vater Other	Resou	rces					Pag	e 1	of 1	
Facilit	y/Projec	t Nam	e Facili	tv			Lice	ense/Pe	ermit/M	onitorir	ng Nun	nber	Boring	Numb	er		
Boring	g Drilled	By (F	irm nar	ne and name of crew ch	ief)		Date	e Drilli	ng Star	ted	Date	Drillin	g Com	pleted	Drillin	g Meth	od
On-	site Er	nviron	imenta	al/Denny Totske				1/	31/98			1/3	81/98		soil p	robe	
DNR	Facility	Well N	lo. W	I Unique Well No.	Common Wel	l Name	Fina	al Stati	c Water	Level	Surf	ace Ele	vation	В	orehole	Diame	eter
Boring	g Locatio	on					<u> </u>	•	0.1."	L	Loc	al Grid	Locatio	on (If ap	plicable	2.0 I e)	ncnes
State 1	Plane	∼f	1//	N of Section	N, E : t NP	S/C/N	T	Lat	0 ' "	,		Fe		N S	1	Feet [
Count	y 1/4 (JI			<u> </u>	DNR Co	unty (Code	Civil T	Cown/C	ity/ or	Village		3			
Wai	ukesha		1	l					Broo	kfield		1	Soil	Brone	ties		I
													301				
	(i p	unts	Fee	Soil/Roc	k Descripti	on For						5					ts
lber	th (i vere	, Co	h In	Each	Major Unit	101		СS	hic	ram	FID	dard	sture	t id	it ic	0)/ men
Nun	Recc	Blow	Dept		-			U S	Grap Log	Well Diag	PID	Stan	Mois	Linu	Plast	P 20	Com
			F	(concrete)													
				FILL, crushed stone													
1	24							ML									
			-2	SILT clavey some f	ine to coarse	grained											
			Ē,	sand, light brown, dr	y.	Brunned											
2	24		Ē	CLAY, silty, trace fi	ne to coarse g	rained		CL									
			-4	sand, brown, moist.													
			E														
3	24		-5														
			-														
			Ē														
			F 7														
														Ì			
I heret	by certif	y that	he info	rmation on this form is	true and corr	ect to the b	est of	f my ki	nowledg	1 ge.		I	I	I	I		
Signat	ure	-					Firm	-	McLa	ren/H	art						
									Brookf Tel: 41	ield, W 4-790-1	isconsi 1974,	n Fax: 4	14-790-	1989			
This fo	orm is a	uthoriz	ed by (Chapters 144, 147 and 1	62, Wis. Stat	s. Comple	tion o	of this	report i	s manda	tory.	Penaltie	es: Forf	feit not	less tha	n \$10 r	nor
more t Each d	nan \$5,0 lay of co	000 foi ontinue	r each v d viola	tion is a separate offens	s than \$10 or e, pursuant to	more than so ss 144.99	\$100 and	or 1mp 162.06	risoned	not les Stats.	s than	30 days	, or bo	in for e	ach viol	ation.	

State o Depar	of Wisco tment of	nsin Natur	al Reso	urces	oute To: Solid Waste Emergency Respons	□ H se □ U	laz. V Inderg	Vaste ground	l Tanks			SOI For	L BOR n 4400	ING LO -122	OG INF	ORMA	.TION 7-91
					Wastewater		Vater Other	Resou	rces					Pag	e 1	of 1	L
Facilit	y/Projec	t Nam	e				Lice	nse/Pe	ermit/M	onitorir	ıg Nun	ıber	Boring	Numb	er		
Boring	clean	USA By (F	Facilii irm nar	ty ne and name of c	rew chief)		Date	Drilli	ng Star	ted	Date	Drillin	g Com	7 pleted	Drillin	g Meth	od
On-	site Er	viron	menta	al/Denny Tots	ke			1/	10/98			1/1	0/98	P	Soiln	robe	
TANTA	600011-000	51720110 1 0		1016-000-000-00-00-00-00-00-00-00-00-00-00-	Common Wall	Nama	Line	L/	Watar	Lougl	Curf	L' I			loveholo	Diam	
DNR	rachny	wen w	10. 11	i Uilique weil im		i Naile	Filla	li Stati	Fee	tevel	Suri	ace Ele	Feet	D	orenoie	2.0 I	nches
Boring	g Locatio	on	000000000000000000000000000000000000000					Lat	0 1 11		Loca	al Grid	Locatio	n (If ap	plicable	e)	
State	Plane	\f	1//	1 of Section	IN, E S	S/C/N	T	Lai	0 ' "			Fa		N S	1	[Feet [
Count	y 1/4 (JI		+ OI Section	1 N,K	DNR Cou	inty (Code	Civil T	'own/Ci	ty/ or	Village		<u> </u>			
Wa	ukesha		1	T					Broo	kfield							T
Sar	nple												Soil	Prope	rties		
		nts	Feet	Soil	/Rock Description	on											s
er	h (ir 'erec	Cou	ln l		Geologic Origin	For		S	lic	am	<u>O</u>	ard ratio	ure nt	-	3		nent
umt	engt	low	epth	L	aon Major Ont			S	rapł og	/ell iagr	ID/I	tand	loist	init	lasti imit	200	QD DIII
$\frac{\mathbf{z}}{1}$	24	B	-			•		2		20	<u>d</u>	5 A	20				
				dark to light bi	e to coarse grained st own, moist.	and											
												:					
2	12			CLAY, silty, t	race fine to coarse g	rained		CL									
			-3	sand and grave	l, brown, moist.												
			F														
3	24		-4														
			Ē,														
			Ē														
			-6														
4	13																
			-7											·			
			-8														
<u>.</u>			h . 1. C		1 1												
I hereb	by certif	y that t	ine info	rmation on this f	orm is true and corre	ct to the be	est of Firm	my kr	Mol	e.							
									Brookfi	ield, Wi	art isconsi	n					
									Tel: 41	4-790-1	974,	Fax: 41	4-790-	1989			
This for more t	orm is au han \$5.0	uthoriz 200 for	ed by C each v	Chapters 144, 147 iolation. Fined r	and 162, Wis. Stats not less than \$10 or r	5. Complet nore than S	tion o \$100 (of this i or imp	report is risoned	manda not les	tory. s than 1	Penaltie 30 davs	s: Forf	eit not h for e	less thai ach viol	a \$10 r. ation.	ior
Each d	lay of co	ontinue	d viola	tion is a separate	offense, pursuant to	ss 144.99	and 1	62.06	, Wis. S	Stats.		.,					

State o Depar	of Wisco tment of	onsin f Natur	al Reso	Route To: Durces Dolid Waste	Ha	nz. Was ndergro	ste ound	Tanks			SOI Fori	L BOR m 4400	ING L(-122	OG INF	ORMA	TION 7-91
						her Ke	soui						Pag	ge 1	of 1	L
Facilit Drv	y/Proje clean	ct Nam USA	e Facili	tv]	License	e/Pe	rmit/M	onitorin	g Nun	nber	Boring	; Numb 8	er		
Boring	g Drilleo	i By (F	irm nar	me and name of crew chief)]	Date D	rillii	ng Star	ted	Date	Drillin	ig Com	pleted	Drillin	g Meth	nod
On-	site Ei	nviror	menta	al/Denny Totske			1/:	31/98			1/3	81/98		soil p	orobe	
DNR	Facility	Well N	lo. W	I Unique Well No. Common Well Nam	ne 1	Final S	tatic	Water	Level	Surf	ace Ele	vation	E	lorehole	Diame	eter
Boring	z Locati	on				1		Fee	t	Loca	al Grid	Feet Locatio	on (If ar	oplicable	$\frac{2.0 \text{ I}}{(2.0)}$	nches
State	Plane			N, E $S/C/2$	N	La	ıt	0 ' "					N		[ΞE
Count	1/4 ·	of	1/4	4 of Section T N,R	R Cour	Long	g 1e	0 ' "	`own/Ci	tv/ or	Fe Village	et 🗌	S		Feet [□ w
Wa	ukesha	l	-					Broo	kfield		,					
Sar	nple											Soil	Prope	rties		-
	<u>e</u> n	ints	Feet	Soil/Rock Description												s
Der	th (i) vere	Co	Ч	And Geologic Origin For Fach Major Unit			2	nic	am	HD	ard	ante	p	S		/ nent
lmul	engl	Blow	Dept				200	jrapl .og	Vell Diagr	ID/I	tand	Aoist	imit	lasti	200	OD III
				(concrete)						<u>, 11</u>		20				
	10			FILL, crushed stone		\neg										
1	18		Ē			— N	1L									
			<u>-</u> 2	SILT, clayey, some fine to coarse graine	ed											
				sand, brown, dry.												
2	6															
			-4													
				i -												
I heret	by certif	y that t	the info	ormation on this form is true and correct to	the bes	st of m	y kn	owledg	e.							
Signat	ure				F	ırm]]]	McLa Brookfi Fel: 41	ren/Ha ield, Wi 4-790-1	art sconsi 974,	n Fax: 41	14-790-	1989			
This fo	orm is a	uthoriz	ed by C	Chapters 144, 147 and 162, Wis. Stats. Co	mpletio	on of th	his r	eport is	manda	tory.	Penaltie	s: Forf	eit not	less tha	n \$10 r	nor

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

ENVIRONMENTAL ENGINEERING CORPORATION	LETTER OF TRANSMITTAL DATE: ///2/98 JOB No: RE:
W239 N2890 Pewaukee Road Unit # D PEWAUKEE, WISCONSIN 53072 phone:(414)523-2040 fax:(414)523-2059	
TO: John Feeney Wisconsin Department of Natura/ Resources 404 N. Richards Screeb, P. O. Box 12436 Miluauhee, Wisconsin 53212-0436	DEGENMFD
WE ARE SENDING: Attached Under se	eparate over via N 1 4 1999
Letter Prints Diskette	Ву
Report Specifications Samples	
Sketch Change Order	
COPIES DATE No. 1/14/97 ST3 Report Dr STS Report Dr	DESCRIPTION Y Clean (ISA Clean (ISA
TRANSMITTED AS CHECKED BELOW:	
For your use For review	v and comment
As requested Prints retu	rmed after loan to McLaren/Hart
For services to be completed	
REMARKS:	
Those are the reports you requested in your letter.	Please call if you have
any questions. Thinks	
COPY TO:SIGNED:	S-IL

January 14, 1997

JAN 1 6 1997

Mr. John Fennimore RREEF Funds 250 East Wisconsin Avenue Suite 925 Milwaukee, WI 53202

Re: Soil Analytical Results From the Hand Augers and Monitoring Well Installation at the Brownstones Shopping Center in Brookfield, Wisconsin -- STS Project No. 85134XA

Dear Mr. Fennimore:

This correspondence has been prepared to present the results of the soil analysis from the hand augers and groundwater monitoring well installation at the Dryclean USA facility located at Brownstones Shopping Center at 17430-17680 West Bluemound Road in Brookfield, Wisconsin. The Dryclean USA facility is located within the 17680 West Bluemound Road building. STS completed three hand augers and installed one monitoring well at the aforementioned site. Soil samples from each of the hand augers, plus the monitoring well, were analyzed for chlorinated volatile organic compounds (CVOCs).

Installation/Sampling of Groundwater Monitoring Well

One monitoring wells, MW-1, was installed at the subject site on December 12, 1996. The well was installed north of the 17680 building near where the sewer line serving Dryclean USA exits from the building. The well was installed in accordance with NR140 of the Wisconsin Administrative Code (WAC). The well location is indicated on the attached Figure 1.

The well was installed to a depth of 15 feet below ground surface (bgs). The boring was drilled using 4-1/4-inch diameter continuous flight hollow stem augers. The well was screened to intersect the groundwater table, with the screen interval from 5 to 15 feet below ground surface. The well was constructed of Schedule 40 PVC well screen and riser. A flush-mounted protector pipe was installed. The well is secured with a flushmount cover that requires a special tool to remove and the cap of the well pipe also has a lock to secure it. Soil sampling was performed every 2 feet while drilling for in-field screening, soil classification and laboratory analytical purposes. The soils were classified visually according to the Unified Soil Classification System (USCS). Soil cuttings generated during the drilling procedure were containerized in WDOT-approved 55-gallon drums and will be stored on-site until proper disposal is arranged.

STS Consultants Ltd. Consulting Engineers

11425 West Lake Park Drive Milwaukee, Wisconsin 53224 414.359.3030/Fax 414.359.0822 RREEF Funds STS Project No. 85134XA January 14, 1997

Ľ,



Soil samples were field screened with a 10.6 eV Photoionization Detector (PID) using the WDNR headspace method to evaluate the presence and degree of impacts, if any. Two soil samples from the well boring were submitted for laboratory analysis. One of the two was from the apparent water table surface. The second sample was from 5 to 7 feet below the ground surface (bgs) at the approximate elevation of the backfill for the sanitary sewer line.

The monitoring well has not yet been sampled because water has not yet collected in the well. STS checked the monitoring well for water on December 19, 1996 and January 3, 1997. STS continues to check for water at the monitoring well approximately once every two weeks. Groundwater elevations are expected to rise in the spring at which time, a water sample will collected from the well once water has collected and the well has been properly developed in accordance with NR140, WAC.

Hand Auger Sampling Procedures

Three hand augers were conducted on the subject property. One hand auger (HA-1) was performed north of the Dry Clean USA facility's rear exit door to determine if any spills of dry cleaning materials had occurred outside of the building. The other two hand augers (HA-2 and HA-3) were located to the north and the south of the dry cleaning machine at Dryclean USA to provide information of possible impacts from the dry cleaning practices at the facility. The locations of these hand augers are indicated on the attached Figure 1.

Coring through the tile and concrete for the interior hand augers and the asphalt pavement for the exterior hand auger was required to perform the hand augers. After the coring was completed a split-spoon soil sample was taken. The soil sample was taken at 0.2-1.5 feet bgs at HA-1. The soil sample was taken at 1.3-1.8 feet bgs at HA-2 and from 1.4-2.0 feet bgs at HA-3. All three of these soil samples were taken from the soils located below the base course.

Samples were split into two samples. One sample was used for field screening soil classification purposes. The second sample was place directly into the laboratory sample jars for analytical testing. Soil samples were field screened using WDNR headspace methods.

The hand auger equipment was decontaminated between boring locations using AlconoxTM and a distilled water rinse to prevent cross-contamination between soil sampling locations.

After the hand augers were completed, the boreholes were abandoned with bentonite chips to the bottom of the concrete or asphalt and filled with a concrete patch to the ground surface. The borehole abandonment forms are attached. RREEF Funds
 STS Project No. 85134XA
 January 14, 1997



Laboratory Analysis

Soil samples were submitted to En Chem, Inc. Laboratory in Green Bay, Wisconsin for the analysis of select CVOCs. The CVOCs included were tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), trans-1,2-dichloroethene, 1,1,2-trichloroethene, 1,1-Dichloroethane, 1,2-dichloroethene and vinyl chloride. These CVOCs were analyzed by EPA Method 8240. The analytical results and the chain-of-custody form are attached.

Soil Description

A silty clay topsoil fill was encountered at the monitoring well, from 0-1 foot bgs. A silty sand and clay fill was present below the topsoil fill to 3 feet bgs. Buried topsoil consisting of a silty clay was present from 3 to 5 feet bgs. A silty clay was present from 5 feet to the terminal depth of the boring, 17 feet bgs. The soil collected at the hand auger locations was a silty clay and sand. The boring logs are attached.

Field Screening Results

Soil samples were screened at 2 foot intervals at the monitoring well location and the sample collected just below the base course at each hand auger location was screened with a PID meter. None of the samples collected had elevated PID readings (readings greater than 1 instrument unit).

Soil Quality

No CVOCs were detected in the soil samples collected from MW-1 or from HA-1, located outside the building. The soil samples collected at HA-2 and HA-3 both had significant concentrations of PCE. At HA-2 the sample had a PCE concentration of 1200 ug/kg approximately equivalent to parts per billion. The sample from HA-3 had a PCE concentration of 2100 ug/kg.

Recommendations

The investigation indicates that a release of PCE has occurred and that PCE is present under the floor slab of the Dryclean USA facility. The notification of this release should be reported to the WDNR. After the release is reported the WDNR will likely recommend an investigation to determine the extent of the affected soils. RREEF Funds STS Project No. 85134XA January 14, 1997



The monitoring well will be monitored, developed and sampled as soon as water collects in the well. The groundwater collected from the well will be analyzed for the same parameters as the soils from the well.

General Qualifications

The results, conclusions and recommendations presented in this report are based upon the data obtained from the specific sampling locations and under the conditions stated in the report. Variations in the soil and groundwater conditions typically exist at most sites between sampling locations and at different times. This report has been prepared to aid our client in the evaluation of the groundwater conditions. This report should not be utilized for any purpose other than specifically stated.

We appreciate the opportunity to be of service to you. Please do not hesitate to contact us at (414)359-3030 if you have any questions or comments.

Respectfully,

STS CONSULTANTS, LTD

Mary L. Siegan, E.O.T.

Assistant Project Engineer

Thomas W Kroeger jmls Thomas W. Kroeger

Principal Hydrogeologist

Attachments

©STS Consultants Ltd., January 1997



STS CONSULTANTS LTD., MILMAUKEE, MISCONSIN 4: \PR0JECTS\85134\XA\65344001 Mon Jan 06 13: 39: 24 1997

State Depar	JA ct Wis tment	N-11 cons of N	199 in atural	9 9	14:35 FROM Route esources O So D Em D Wa	THE RREEF To: No Waste ergency Respon stewater	FUND se 0 0	IS Haz. Under Water Other	Waste Igrouni Reso: :	d Tanks urces	то		5. Fo	5 UIL BU orm 440	2320 041NG 00-12	59 2 8	P. 07 11NF 01 5134X	7-91 A Page 1 of 1
Facilii 17680	ty/Proj West E	ect N Bluemo	ame ound R	oa	Ø			Licen	se/Pei	mit/Mor	itoring] Numbe	er	Boring MN-1	Numbe	er		
Boring Wiscon	g Drilleo nsin So pw Guer	d By Mil Tes	(Firm r ling	nan	ne and name of crew	chief)		Date 12/12.	Drilling 198	Starte	đ	Date D 12/12/5)rilling 96	Comple	ted	Drilling I Salia Si	Method em Aug	jer
DNR F	acility	Well	NO. 1	11	Unique Well No.	Common Well Na MW-1	eme	Water	Leve			Surfac	e Elev	ration		Borehol 4.25 inc	e Dlamo thes	eter
Boring State	g Locat Plane		of Sec	tic	on 28. T 7 N. R 20 E			Lat				Local (<i>Feel</i>	Srid Lo S	ocation	(if ap F	plicable eet W	:}	
Count Wauke	y sha Co	ounty					0NR (68	County	Code	Civil To City of	wn/Ci ' Broo	ty/ or \ kfield, k	Village Viscon:	sin				
Sar	nple													Soil	Prope	erties		
Vumber	ength Recovered (in)	Blow Counts	Depth in Feet		Soil/Ri And Ge Eac	ock Description ologic Origin For :h Major Unit			nscs	Graphic Log	Nell Diagram	EID F 10	Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			+		Fill: Topsoil-silly c	lay, trace fine to	o coars	se	CL			Ľ				-		
1	ô	7	E 2.5	5	Fill: Silty sand and	clay, some fine	to coa	rse _	CL/SN			<1						
2	4	8			gravel-brown-mais	l trace fine to co	arse]	CL			<1	0.5					
3	17	6	Ē		gravel-brown-mois	1						<1	0.5					
4	24	15	7.5	5	Silty clay, trace si seams-brown to gr	t seams and time ay-moist	sang				NIIIIIII	<1	4.5+					
5	24	19	-10									<1	4.5	-				
6	24	31	L 12.	5								<1	4.5+					
7	24	27	E 15									<1	4.5+					
9	24	26	Ę									<1	3.75					
			20	.5	END OF BORING Groundwater monito feet on 12-12-98.	oring well instaile	ed to 16	5.0										
			25	.5				to the		f my ke	Oblec							
Signa	ture	ary t	nat th	e i		na is true and Co		Firm	α			<u>- </u>	1]				
This f than s or Dol	ormis a sl0 nor th for e	More	ized t than t riolatio	2 55 in.	Charters 144,147 and .000 or each violati Each day of continu	a 162, Wis. Stats on. Fined not le Jed violation is a	s. Com ss thai a separ	pletion n \$10 o rate of	of this r more fense,	s report than S pursuar	is ma 100 or ht to s	ndetory impriso is 144.9	Pen ned n 9 and	alties: F ot less 162.06,	Forfeit than 3 Wis. 5	L not les 10 days, 5tats.	\$	

State Depar	JAI of Wis tment	N-11 consi of Na	-1999 n Itural F	14:35 FRDM Roule Resources 0 Sc 0 Eπ 0 Wa	INE KKEEF Io: lid Waste ergency Respor stewater	FUND: nse D D	S Haz. Undel Water Other	Waste rground Resou T	i Tanks Irces	ТО		S. Fa	5 010 OC 017 04	2328 יייוג חי 00-12	159 5 COG 22 8	P. Ø8	7-91 A Page 1 of
Facilii 17680	ty/Proje West E	ect Na Bivemo	ime und Roa	ad			Licen	se/Per	mit/Mor	hitorin	g Numbe	er	Boring HA-1	NumD	er		
Boring STS (g Drilled Consulta	By (ants L	Firm na tơ.	me and name of crew	chief)		Date 12/12,	Drilling /96	Starte	d	Date 0 12/12/1	Drilling 96	Comple	teđ	Drilling Hand A	Method uger	
DNR F	acility	Well N	0. WI	Unique Well No.	Common Well N	ame	Water	r Level			Surfac	e Elev	ration		Borehol 3.0 Incl	e Diam res	eter
Boring State	j Locat Plane 4 of Sk	ion (1/4 o	t Secti	on 28. T 7 N. R 20 E			Lat				Local Feet	Grid Lo S	ocation	(if ap F	oplicable Feet W	2)	
Count Wauke	y sha Co	unty				DNR (68	County	Code	Civil To City of	own/Ci ' <i>Eroo</i>	ity/ or ` kfield, P	Village Viscon	sin				
San	nole												Soil	Prop	erties		
lumber	ength ecovered (in)	liom Counts	Jepth in Feel	Soit/Re And Ge Eac	ock Description ologic Origin Foi :h Major Unit	r		15CS	Graphic - og	vell Diagram	DE ID	Compressive	Moisture Content	iquid imit	plastic Limit	200	RGD/ Comments
	- -	يى 		Asphall pavement			ſ	CI /SP							+		
			2.5 1.2.5 1.1.5 1.1.7.5 1.1.10 1.12.5 1.1.15 1.	Silty clay and fine END OF BORING Backfilled with ben patch at surface.	to coarse sand tonite chips and	-brown d concr	-mois[ete										
			Ē		m in true and r	0/1901	To the	heet	1 1 1 1 1 1	owled							
Signa	iure		at the	NOCAN		orrect	Firm	55	5		MEU	Ite	nds	<u>م</u> ر ک	74		
This than or bot	orm is a \$10 nor th for e	more ach vi	zed by than \$5 olation.	Chapters 144.147 and 0000 for each violation Each cay of contin	d 162, Wis, Stat on, Fined not le ued violation is	s. Com ess than a separ	pletion n \$10 c rate of	of this more fense,	report than S pursuar	is ma 100 or ht to s	impriso ss 144.9	y. Pen oned n 39 and	alties: F ot less 162.06,	Fortei than (Wis,	t not les 30 days, Stats,		

State Depar	JA of Wis iment	N-11 consi of Na	.—1999 in atural F	9 14:35 FRDM Route Resources D So D Em D Wa	THE RREEF To. Id Waste ergency Respor stewater	FUND nse [] []	S Həz. 1 Under Water Other	daste groupi Resoi	d Tanks Irces	ТО		5V F d	5 UIL DU Drm 44	52320 JHINU 00-12	359 5 LUG 2 8	P.09	7-91 A Page 1 of 1
Facilii 17680	ty/Proju West B	ect Na	ame Sund Roa	ad			Licen	se/Per	mit/Mor	nitoring	g Numbe	er	Boring H4-2	Numb	er		
Boring STS (g Brille¢ Consulta	1 By (ants L	(Firm na td.	ame and name of crew	chief)		Date 12/12	Drilling 198	Starte	d	Date D 12/12/5	Dritling 98	Comple	ted	Drilling I Hand A	Method uger	
ONR F	acility	Well N	IC. WI	Unique Well No.	Common Well Na	əme	Water	Level			Surfac	e Elev	ration		Borehal 3.0 inch	e Diami es	eter
Boring State	g Locat Plane 4 of Sh	ion 1 1/4 d	of Secti	ian 28. T 7 N. R 20 E			Lat	•			Local I <i>Feet</i>	Grid Lo S	ocation	(if ap <i>F</i>	plicable 'eet W	2)	
Count Wauke	y sha Co	unty				DNR 0 68	County	Code	Civil To City of	wn/Ci (Broo	ty/ or \ kfield, k	Village √iscon	sin				
Sar	nple												Soil	Prope	erties		
łumber	ength Recovered (in)	Blow Counts	Depth in Feel	Soit/Ro And Ger Eac	bak Description blogic Origin For h Major Unit			uscs	Graphic Log	Well Diagram	PIDF ID	Compressive Strenath	Moisture Content	Liquid Limit	Plastic Limit	P 200	ROD/ Comments
			E	Concrete under tile	,		Γ	GP	• •			<u> </u>	1	<u> </u>			
	4		E	Base coarse			F	CL.				1	+		<u> </u> 		
			E	Fill: Silty clay with gravel-brown-mois	fine to coarse s t	iand an	id										
			10 10 12.5 10 12.5 10 12.5 12	END OF BORING Gackfilled with ben patch.	tonite chips and	d conar:	ete										
1 here	by cer	tify tr	hat the	information on this for	m is true and co	orrect	to the	j best o	l f my kn	owledg	je.	L		1		<u> </u>	
Signa	ture	<u>u</u>	2	rean)				575	2 (500	الم	and	1572-	ld			
This Inten S or bot	enti is a \$10 nor Ih for e	more ach v	ized by than \$5 iolation,	/ Chapters 144,147 and 5,000 for each violation , Each day of continu	: 162, Wis, Stats on, Fined not le red violation is a	s. Com iss lhar a separ	oletion h \$10 o ate of	of this r more fense,	than 3 pursuar	is mai 100 or ht to s	impriso s 144,9	y. Pen Ined n 19 and	alties: F ot less 182.08,	-orfeil than 3 Wis, 5	i not les 10 days, Stats,	S	

State Ņepar	Jr of Wis tmęnt	AN-11 consu of Na	1999 n Itural I	9 14:36 Resources	FRUM Route O So O Em O Wa	THE KKEEF To. Ind Waste ergency Respor slewaler	- FUNI Inse D D	Haz. Under Water Other	Waste Iground Resou :	d Tanks Irces	TO		SI Fo	JIL OL orm 441	52320 JHING 00-12	259 2 2 8	P. 10 117 UI 5134X	TMA FION 7-91 A Page Lot
Facili 17680	ty/Proj West E	ect Na Bluemoi	me und Ro	ad				Licen	se/Per	mit/Mor	hitoring	g Numbe	er	Boring HA-3	Numbe	er		
Boring STS U	g Drilled Consult	By () ants Li	Firm na tơ.	ame and name (of crew	chiet)		Date 12/12,	Brilling (96	Starte	d	Date () 12/12/1	orilling 96	Comple	ted	Drilling I Hand A	Method <i>uger</i>	
DNR F	acility	Well N	o. WI	Unique Well No).	Common Well Na	ame	Water	Level			Surfac	e Elev	ation		Borehol 3.0 inch	e Diam nes	eter
Boring State	g Locat Plane		f Sarli	100 28 T T N F	20 F			Lat	•			Local <i>Feet</i>	Grið Lo S	ocation	(if ap F	plicable eet W	;)	
Count Wauke	y sha Co	nunty	/ 2001				ONR C	County	Code	Civil To City of	wn/Ci f Broo	ty/ or ' k <i>field, k</i>	Village Viscon	sin				
Sar	ndle													Soil	Prope	rties	·	
Vumber	ength Recovered (in)	Blow Counts	Depth in Feet		Soil/Ro And Geo Eac	ock Description blogic Origin For h Major Unit			uscs	Graphic Łog	vieli Niagram	PIDF 10	Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	AQD/ Comments
			E	Concrete ur	nder tile	iloor		ſ	GP	• • •				1				
1	5		2.5 1.2.5 1.1.1 1.2.5 1.1.1 1.2.5 1.1.1 1.1.5 1.1.	Base coarsi Fill: Silty cla gravel-brow END OF BOR Backfilled w patch.	e ay and i an-mois RING tith beni	fine to coarse s t	and an	d fete										
Ihere	eby cer	tify th	t the	information on	this for	rm is true and c	orrect	to the	l Dest o	l ímy kn	owled	ge.	<u> </u>	!	<u> </u>		<u> </u>	:
Signa	YIe 10	m	2	roger	>		.	Firm	35	5(m	<u>S1)</u>	40	ds.				
This f than or bo	S10 nor 10 for e	authan more ach vi	zed by than \$1 olation	Chapters 144 5.000 (for each Each day of	.147 and violatic continu	o 162, Wist Stats on, Fined not le ued violation is a	s. Lomp ss than a separ	n \$10 o ate of	r more fense.	then S oursua	100 or nt to s	impriso s 144.9	ned n 9 and	anies:) ot less 162.06,	than 3 Wis.	o days. Stats.		

State of Wiscontin Dependent of Neural Resources State as: Dependent of Neural Resources State as: Dependent of Neural Resources Month of Neural Resources Month of Res. 45 Stateword of Neural Resources Come of Coll Learning Neural Table Observation Neural	JAN-11-1999 14:36 FROM TH	E RREEF FUNDS	ТО	5232059 P.11	
Dependence of Name Research Even and Research Even and Research Free Research <td>State of Wisconsin Rome to: So</td> <td>hid Waste 🛛 Haz, Waste</td> <td>Wastewater</td> <td>MONITORING WELL CONS</td> <td>TRUCTIC</td>	State of Wisconsin Rome to: So	hid Waste 🛛 Haz, Waste	Wastewater	MONITORING WELL CONS	TRUCTIC
Trailing/Droper Name Load Grid Lasson of Well R. H. Well News NWL News NWL News Type of Well Water Table Observation Well Mills Control Origin Lasson of Well News N. N. N. N. H. Well Named To the Well Named To	Department of Natural Resources Env. Response	: & Remain D Undergen	ound Tanks [] Other []	Form 4400-113A	Rev. 4-5
Disconsisting Number Child Ottgain Lessing Type of Well Water Table Observation Well Will Note Child Ottgain Lessing Child Ottgain Lessing Child Ottgain Lessing Child Ottgain Lessing Disconserver the Well Well Note Child Ottgain Lessing Child Ottgain Lessing <td< td=""><td>Facility/Project Name</td><td>Local Grid Location of</td><td>Well</td><td>Well Name</td><td></td></td<>	Facility/Project Name	Local Grid Location of	Well	Well Name	
Pressing Locks, Fermin of columns probability Chin Origin Locks Chin Origin Locks Pressing Locks, Fermin of columns probability Type of Well Wester Table Observations Well & Transformer, Well & Frank Wester Source In Column of the Source N. N. N. N. P. Det Well Installed Interference of Columns of the Source Type of Well & Frank Wester Source Interference of Well & Frank Wester Source Interference of Well & Frank Wester Source N. N. N. N. P. Det Well Installed Interference of Well A Column of Wester Source IS Well A Point of Enforcement Sid. Applications Interfere Columns of Wester Source Interfere Columns of Wester Source Wester Source IS Well A Point of Enforcement Sid. Applications Interfere Columns of Wester Source Interfere Columns of Wester Source Interfere Columns of Wester Source IS Well A Point of Enforcement Sid. Applications Interfere Columns of Wester Source Interfere Columns of Wester Source Interfere Columns of Wester Source IS Well A Point of Enforcement Sid. Applications Interfere Columns of Wester Source Interfere Columns of Wester Source Interfere Columns of Wester Source IS Well A Mester Columns of Wester Source Interfere Columns of Wester Source Interfere Columns of Wester Source Interfere Columns of Wester Source IS Wester Source Mester Source Interfere Columns of Wester Source Interfere Columns of Wester Sourc	Brownstone REEF		<u>h</u> H w	1110-1	
Type of Well Water Table Overwarean Well Will St. PreseNot Note: State of Mater Source 1Discrete Table Overwarean Well Will State of West/SourceDiscrete Table Overwarean Well Will State of West/SourceIn the Colspan="2" Colspan="2	Facility License, Permit of Monitoring Number		Ima	Witt timper Wold Number DNR.	(eit humbr
Number If Control and Control an	Type of Well Water Table Observation Well 11	St Diese	- Lucig 0	Date Well Installed	
Description of Experiment Sat ApplicationalIS Well A Foins of Enforment Sat ApplicationalImage: Sat ApplicationalImage: Sat ApplicationalImage: Sat ApplicationalIS Well A Foins of Enforment Sat ApplicationalImage: Sat ApplicationalImage: Sat ApplicationalImage: Sat ApplicationalA. Protective pipe, top clarationImage: Sat ApplicationImage: Sat ApplicationalImage: Sat ApplicationalA. Protective pipe, top clarationImage: Sat ApplicationImage: Sat ApplicationImage: Sat ApplicationB. Well casing, top clarationImage: Sat ApplicationImage: Sat ApplicationImage: Sat ApplicationB. Well casing, top clarationImage: Sat ApplicationImage: Sat ApplicationImage: Sat ApplicationB. Surface seal:Sat ApplicationImage: Sat ApplicationImage: Sat ApplicationI. USCS classification of submer servers:Image: Sat ApplicationImage: Sat ApplicationI. USCS classification of submer servers:Image: Sat ApplicationImage: Sat ApplicationI. Starten seal:Sat ApplicationImage: Sat ApplicationImage: Sat Appli	Piezometer [12	Section Location of Wa	IL N IL E.		<u>96</u>
Image: Start of Enforcement Sd. Application: Image: Sd. Application: Image	Distance Well Is From Waste/Source Boundary	1/4 of 1/4 of S	T NR HE	Well Installed By: (Person's Name	md Firm)
Like Weith A Promotion of Landbergendiese □ Stategradieset Wild Construction Wild Construction A Protective pipe, top elevation	ft	Location of Well Relat	VE 10 Waste/Source	Hindrew Guenner	
A. Protective pipe, top clovation A. MSL I. Cory and lock? I. Yes No B. Well casing, top clovation A. MSL I. Cory and lock? I. Yes No D. Surface seal, bottom A. MSL or I. Cory and lock? I. Well casing: I. Yes No 12. USC4 classification of one mere screen: G. Cory and lock? I. Well casing: I. Yes No 13. Surface seal, bottom C. Cory and lock? Well casing: I. Yes No 14. Drilling nucleod used: Return J. Source seal: Coencole I. Male science I. Yes No 15. Delling nucleod used: Return J. Source seal: Coencole I. Male science I. Male science <t< td=""><td>Is Well A Point of Enforcement Std. Application?</td><td></td><td>s 🔲 Sidegrachient</td><td>WISCONSID SAL TAL</td><td></td></t<>	Is Well A Point of Enforcement Std. Application?		s 🔲 Sidegrachient	WISCONSID SAL TAL	
A Productive pipe, up certain in MSL in M		A USI -	n Li Not Known	7	
B. Well casing: top elevationf. MSL orf. MSL orf. C is and provide the set bottomf. MSL orf. C is a finite set of the dore C is a finite set of th	A Protective pipe, top crevation		2. Protective co	·· · · · · · · · · · · · · · · · · · ·	
C. Last surface elevation ft MSL (A SL or	B. Well casing, top elevation	L MSL	a Inside diam	xia.	_8.9ir
D. Surface seal. bottom	C. Land surface elevation	A. MSL	b. Length:		_1.0ft
Image: Second	D. Surface seal, bottom ft. MSL or	DR	c. Material:	Ster	1 🗖 🖓
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	12 LISC'S classification of soil new screep			Aluminum Ob	
SM □ SC □ ML □ MH □ CL □ CH □ 3. Surface scal: Correst 0 0.0 13. Sive analysis statched? I Yes ■ INo 3. Surface scal: Correst 0 0.0 14. Drilling method tuscd: Rotary □ 50 4. Material between well essing and protective pipe: Between well essing and protective pipe: Between well essing and protective pipe: 15. Dolling finid used: Weer □ 02 Air □ 01 Annuler space scal: Correct 0 000 □ 16. Dolling skinives used? I.Ye. ■ No No Describe: All A Office 0 000 □ 17. Source of water (statch analysis): N/A Image scal: a Correct 0 000 □ Signal mut weight Bernomic seadd stary □ 35 F. Fine sand, top ft. MSL or _ 3.5 ft. No Signal mut weight Bernomic seadd stary □ 35 F. Fine sand, top ft. MSL or _ 4.0 ft. ft. Signal mut weight Bernomic publics □ 32 F. Fine sand, top ft. MSL or _ 4.0 ft. ft. ft. ft. ft. ft. J. Filter pack, top ft. MSL or _ 15.0 ft. ft. ft. ft. ft. ft. ft. ft. J. Filter pack, bottom ft. ft. ft. ft. <t< td=""><td></td><td>SP []</td><td>If yes, des</td><td>arity Expandable Cap</td><td></td></t<>		SP []	If yes, des	arity Expandable Cap	
Berdeck L 3. Sive malysis stanched? I Yes No 13. Sive malysis stanched? I Yes No No Other I Stanched Stanched? I Yes No 14. Drilling method used: Rotary I SO Hollow Stem Aurger II 41 Rotarnine I SO Acceler I Stanche Stanched? I Yes No 15. Drilling fluid used: Weer [0.2 Air [0.1 Acceler I Stanche Stanched Stanches and Aurger II So S. Annuer races seal: a. Corrent if Beatonine Starry II Stanche Stanches and Aurger II So S. Annuer races seal: a. Corrent if Beatonine Starry II Stanches Starry II Stanches and Aurger II Stanches and Aurger III So S. Annuer races seal: a. Corrent if Beatonine Starry II Stanches and Aurger III Stanches and Aurger IIII Stanches and Aurger IIII Stanches and Aurger IIII Stanches and Aurger IIII Stanches IIII Stanches and Aurger IIII Stanches and Aurger IIII Stanches IIII Stanches Aurger IIII Stanches IIII Stanches IIII Stanches IIIII Stanches IIII Stanches IIII Stanches IIIIIII Stanches IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	SM D SC D MLD MHD CL D			Bennei	
13. Serve marges minimed 11 real 12 No 14. Drilling method used: Reary []] 5 14. Drilling method used: Reary []] 14. Material between well easing and promotive pipe: Rearming []] 31 15. Deilling mid used: Wert []] 0.2 Air []] 0.1 Rearming []] 31 15. Deilling mid used: Wert []] 0.2 Air []] 0.1 Rearming []] 32 16. Deilling additives used? []] Yes []] No Rearming []] Rearming []] 33 16. Deilling additives used? []] Yes []] No Rearming []] Rearming []] 31 17. Source of water (attach malysis): []] No Rearming []] Rearming []] 32 17. Source of water (attach malysis): []] No Rearming []] Rearming []] 32 17. Source of water (attach malysis): []] No Rearming []] Rearming []] 33 17. Source of water (attach malysis): []] No Rearming []] Rearming []] 33 17. Source of water (attach malysis): []] No []] No Rearming []] 34 . 17. Source of water			3. Surface seal:	Concre	
14. Drilling method tool: Rotery [] 300 Hollow Stem Auger [] 41 Other [] 201	13. Sieve mulysis machear Li Yes 121			Obs	r 🛛 🦉
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	I4. Drilling method used: Rotary		4. Material betw	veen well casing and prometive pipe:	-
15. Delling fluid used: Were $\square 02$ Air $\square 01$ 01 15. Delling fluid used: Were $\square 02$ Air $\square 01$ 01 15. Delling fluid used: Were $\square 02$ Air $\square 01$ 01 15. Delling fluid used: Were $\square 02$ Air $\square 01$ 02 16. Delling additives used? \square Yes 16. Delling additives used? \square Yes 17. Source of water (attach analysis): \square A 18. Bentonite seal. top \square A. MSL or $_ 3.5$ ft 19. Fine sand, top \square A. MSL or $_ 4.5$ ft 10. Serven joint, top \square A. MSL or $_ 4.5$ ft 11. Well bontom \square A. MSL or $_ 15.0$ ft 11. Borehole, diameter $\underline{3.9}$ ft 12. Borehole, bontom \square A. MSL or $_ 12.0$ ft 13. Source $\subseteq 4.2$ ft 14. Borehole, bontom \square A. MSL or $_ 12.0$ ft 11. Borehole, diameter $\underline{3.9}$ in					1a∐ 3(-1 m ∞
15. Drilling fluid uset: Weer □ 0.2 Air □ 0.1 Drilling Mod □ 0.3 Nones ■ 9.9 16. Drilling Mod □ 0.3 Nones ■ 9.9 17. Source of water (attach malysis): N A E. Bentonite scall topft. MSL or3.9 ft. F. Fine sund, topft. MSL or3.9 ft. G. Filter pack, topft. MSL or3.9 ft. I. Well bonomft. MSL or4.5 ft. I. Well bonomft. MSL or4.5 ft. S. Korehole, bottomft. MSL or4.2 ft. Sector joint, topft. MSL or4.2 ft. Sector joint is sector joint. Sectorft. M. O.D. well casing2.2 ft. N. LD, well casing2.	· · · ·			None m	
16. Deilling additives used? \Box Yes \blacksquare No 16. Deilling additives used? \Box Yes \blacksquare No 17. Source of water (attach analysis): \Box \Box \Box Bentonitic Bentonitic - sand sharey \Box Statement Bentonitic Bentonitic - sand sharey \Box Statement Bentonitic B	15. Drilling fluid used: Water 0 02 Air 0	01	5. Annular space	e scal: a. Granular Bentoni	3 3 3
16. Dailing additives used? □.Yes ■ No 16. Dailing additives used? □.Yes ■ No Describe N/A Statumestic additives used? 0.1 17. Source of water (attach analysis): N/A Tennis paraged 0.2 17. Source of water (attach analysis): N/A Tennis paraged 0.2 17. Source of water (attach analysis): N/A Tennis paraged 0.2 18. Bentonite scal. top ft. MSL or _ 3.9 ft. N/A Conving additives 0.2 17. Fine sand, top ft. MSL or _ 4.2 ft. Statumest added 0.2 0.2 0.11/4 in. @3/8 in. □1/2 in. Bentonise palles □ 3.2 16. Filter pack top ft. MSL or _ 4.2 ft. ft. 0.11/4 in. @3/8 in. □1/2 in. Bentonise palles □ 3.2 17. Fine sand, top ft. MSL or _ 4.2 ft. ft. 0.2 ft. 17. Fine sand, top ft. MSL or _ 1.5 0 ft. ft. 0.11/4 in. @3/8 in. □1/2 in. Bentonise conset and meets for a 2.2 ft. 18. Volume added 0.2.2 ft. ft. 1.4 ft. 1.5 0 ft. 19. Volume added 0.2 ft. 1.1 0.2 ft. 1.1 0.2 ft. 1.1 0.2 ft. 1.1 0.2 ft. 19. Volume added <	Dalling Mind 03 None EL	99	blbs/	gal mud weight Bemonite-sand shur	ry 🖸 35
Describe $N A$ P determine $N A17. Source of water (attach analysis): N A17. Source of water (attach analysis): N AR determine N A17. Source of water (attach analysis): N AR determine N A A R determine N A A A A A A A A A A A A A A A A A A A$	16. Drilling additives used?	No.	cLbs/	al mud weight Benamite shur	y 🗖 31
DescribeN A17. Source of water (statch analysis):N A17. Source of water (statch analysis):N A17. Source of water (statch analysis):N A18. Benuonite scal. top			d% Be	Etonitz	on □' 50
17. Source of water (attach analysis): Tremis pumped \Box 02 R Bentomite scal, top ft. MSL or	Describe N A			The volume added for any of the abov	e is FT 0:
NIACarvity \blacksquare E. Benzonite scal. topft. MSL or3.9 ft.6. Benzonite scal:a. Benzonite grandes [] 33F. Fine sand, topft. MSL or3.5 ft.b. [] 1/2 in. Benzonite pellets [] 32G. Filter pack, topft. MSL or4.5 ftG. Filter pack, topft. MSL or4.5 ftH. Screen joint, topft. MSL or4.5 ftJ. Well bottomft. MSL or4.5 ftJ. Filter pack, bottomft. MSL or4.5 ftJ. Filter pack, bottomft. MSL or4.5 ft.J. Filter pack, bottom	17. Source of water (attach analysis):			Tremie pumper	
R. Bentonite scal. top ft. MSL or 3.9 ft 6. Bentonite scal: a. Bentonite graphers 3.3 F. Fine sand, top ft. MSL or 3.5 ft 0. Ell/4 in. El3/8 in. $\Box 1/2$ in. Bentonite graphers 3.2 G. Filter pack, top ft. MSL or 4.2 ft $a. C \in Flinnt 3.5/45 a. C \in Flinnt H. Screen joint, top ft. MSL or 4.2 ft b. Volume edded 0.2 ft a. C \in Flinnt 3.5/45 a. C \in Flinnt a. C \in Flint <$	NIA			Gravit	y 🖬 0.8
R. Bentonite scal. top It. MSL or		2	6. Bentonite sea	l: a. Bentonin grande	¤ 🔲 3 3
F. Fine sand, top f. MSL or 3.5 ft. 7. Fine sand material: Manufacturer, product name & mesh size a. $led \geq Flint 3.5/45 G. Filter pack, top ft. MSL or 4.5 ft. H. Screen joint, top ft. MSL or 4.5 ft. I. Well bottom ft. MSL or 1.5 0 ft. J. Filter pack, bottom ft. MSL or 1.6 0 ft. J. Filter pack, bottom ft. MSL or 1.6 0 ft. J. Filter pack, bottom ft. MSL or 1.6 0 ft. J. Filter pack, bottom ft. MSL or 1.2 0 ft. J. Filter pack, bottom ft. MSL or 1.2 0 ft. J. Filter pack, bottom ft. MSL or 1.2 0 ft. L. Borehole, diameter 8.0 in 50 or Soloron Soloron Soloron I. Borehole, diameter 8.0 in Soloron Soloron Soloron Soloron I. Borehole, diameter 8.0 in Soloron Soloron Soloron Soloron I. Borehole, diameter 8.0 in Soloron I. Borehole, diameter 8.0 in Soloron I. D. well casing 2.3 7 in$	E. Bentonite scal. top H. MSL or		b. 🗆 1/4 m.	■3/8 in. □ 1/2 in. Bentonite peller	B 3 2
0. Filter pack top ft. MSL or 42 ft. H. Screen joint, top ft. MSL or 42 ft. H. Screen joint, top ft. MSL or 42 ft. J. Well bottom ft. MSL or 150 ft. J. Filter pack material: Manufacturer, product names and meth six a. $\frac{ft. d \in F(n)T}{35/45}$ $35/45$ J. Well bottom ft. MSL or 150 ft. J. Filter pack bottom ft. MSL or 120 ft. J. Filter pack bottom ft. MSL or 120 ft. J. Filter pack bottom ft. MSL or 120 ft. J. Filter pack bottom ft. MSL or 120 ft. K. Borehole, bottom ft. MSL or 120 ft. L. Borehole, diameter 80° in. 50° in. Splint Splint Splint	F. Fine sand, top ft. MSL or	35 ft.	2. Fine sand ma	terial: Manufacturer, worther name &	r 🛛 🥁
G. Filter pack, top ft MSL or ft ft b. Volume added $\underbrace{0.22}_{h^3}$ H. Screen joint, top ft MSL or ft ft s. Filter pack material: Manufacturer, product names and mesh six a. $\underline{P42} \in P_{LAT}$ 35/45 b. Volume added $\underbrace{5.28}_{h^3}$ ft b. Volume added $\underbrace{5.28}_{h^3}$ ft c. Solution ft MSL or ft c. Solution ft MSL or ft m. O.D. well casing $\underbrace{2.32}_{Spion}$ in $\underbrace{5pin}_{Spion}$ Sinch N. I.D. well casing $\underbrace{2.9}_{h^3}$ in $\underbrace{5pin}_{Spion}$ Sinch 1. Beetfill material (below filter pack): Note filter pack): Note filter pack to the best of my knowledge. Signature ft material frame STS (ft for the best of my knowledge.)			a Red F	110T 35/45	ST ST
H. Screen joint, topR. MSL or4 S ft. I. Well bottomR. MSL or _150 ft. J. Filter pack, bottomR. MSL or _160 ft. J. Filter pack, bottomR. MSL or _160 ft. K. Borehole, bottomR. MSL or _170 ft. L. Borehole, diameter80 inSplit M. O.D. well casing _237 inSplit N. LD. well casing _206 inState I. berefole, bottomR. MSL or _170 ft. M. O.D. well casing _237 inSplit N. LD. well casing _206 inState I. berefole, bottomR. MSL or _170 ft. M. O.D. well casing _206 inState I. berefole, bottomR. MSL or _170 ft. M. O.D. well casing _206 inState I. berefole, bottomR. MSL or _170 ft. M. D. well casing _206 inState I. berefole, bottomR. MSL or _170 ft. M. D. well casing _206 inState I. berefole, bottomR. MSL or _170 ft. M. D. Well casing _206 inState I. berefole, bottomR. MSL or _170 ft. M. D. Well casing _206 inState I. berefole casing _206 inState I. berefole casing _206 in More II 14 (Cd Elicat State) More II 14 (Cd	G. Filter pack, top ft. MSL or	40 m	b. Volume ac	Kod 0.22 R3	
H. Screen joint top it. Mist or150 ft is volume actived $\frac{5.28}{100}$ ft			8. Filter pack m	aterial: Manufacturer, product name ar	d mesh siz
I. Well bottomf. MSL or _150 ft 9. Well casing: Flush threaded PVC schedule 40 = 23 Flush threaded PVC schedule 40 = 24 I. Schedule 40 = 23 Flush threaded PVC schedule 40 = 24 I. Schedule 40 = 23 Flush threaded PVC schedule 40 = 23 Flush threaded PVC schedule 40 = 24 I. Schedule to the flush threaded PVC schedule 40 = 23 Flush threaded PVC schedule 40 = 23 Flush threaded PVC schedule 40 = 23 Flush threaded PVC schedule 40 = 24 I. Schedule to the flush threaded PVC schedule 40 = 14 I. Bactfill material (below filter pack): Nore = 14 Flush threaded PVC schedule 40 = 14	H. Screen joint top IC MSL or		- Juc Fi	1/1/5 Hered 5 27 63	<u> </u>
Flush threaded PVC schedule 80 \square 24 I. Filter pack, bottom ft. MSL or1 \square Q ft. N. Borchole, diameter $B_{,0}^{O}$ in. Split \square Q ft. I. Borchole, diameter $B_{,0}^{O}$ in. Split \square Q ft. N. OD. well casing $2 \cdot 2 \cdot 6$ in. Split \square Q ft. N. LD. well casing $2 \cdot 2 \cdot 6$ in. Split \square Q ft. I. bereby certify that the information on this form is true and correct to the best of my knowledge. Signal are \square	I. Weil bottom ft. MSL or	50 m 5 T	9. Well casing:	Flush threaded PVC schedule 4	0 🔳 23
I. Filter pack, bottomft MSL or[6 Q ft K. Borehole, bottomft MSL or17 D ft L. Borehole, diameter $\frac{30}{2}$ in $\frac{5p_1 n}{sp_1 on surft}$ M. O.D. well casing $\frac{2}{3}$ 7 in $\frac{5p_1 n}{sp_1 on surft}$ N. LD. well casing $\frac{2}{2}$ 0 6 in $\frac{7}{2}$ Reference to the best of my knowledge. I hereby certify that the information on this form is true and correct to the best of my knowledge.				Flush threaded PVC schedule 8	24
K. Borchole, bottomft. MSL or _1]. \mathcal{O} ft. L. Borchole, diameterSo in. Spin Sample M. O.D. well casingJ Z in. \mathcal{O} form is true and correct to the best of my knowledge. N. LD. well casing Z O 6 in. \mathcal{O} form is true and correct to the best of my knowledge. I hereby certify that the information on this form is true and correct to the best of my knowledge.	J. Filter pack, bottom ft. MSL or _ /	6.Q A		Other	· 🛛 🕎
K Borchole, bottom $2 - 2 - 2 - 1 - 1 - 2 - 1 - 1 - 2 - 1 - 1$	T D I I I I I I I I I I I I I I I I I I	7 () #	10. Screen mater	ial:	
L. Borchole, diameter 30 in. Spion Sund. M. O.D. well casing $-2.3.7$ in. N. LD. well casing $-2.0.6$ in. I hereby certify that the information on this form is true and correct to the best of my knowledge. Signalogie	K. Borenoie, bottom			Continuous ale	и 💼 11 м 🗍 ол
M. O.D. well casing 237 in N. LD. well casing 206 in 1 hereby certify that the information on this form is true and correct to the best of my knowledge. Signature 11 from 575 525	L. Borchole, diameter 30 in. So			Oth	
M. O.D. well casing 237 in. N. LD. well casing 206 in. 1. Backfill material (below filter pack): 1. Backfill		15 10 17	b. Marnufactu	Bedrock Entropical	
N. LD. well casing 206 in. 11. Backfill material (below filter pack): Nons III 14 I hereby certify that the information on this form is true and correct to the best of my knowledge. Other II	M. O.D. well casing 237 in.	Barring - Kond	c. Slot size:		0.0 Chin
N. LD. weil caong 2.0 6 m. It. Backrui material (octow litter pack); Node in 14 R. LD. weil caong				igui riel Aelour Alexandria No.	<u>, 12,5</u> m ~
I hereby certify that the information on this form is true and correct to the best of my knowledge.	N. LD. Well chang _ L. U. b m.		LI. DECKIU MALE	Flint Sant Othe	s mai 14 s Cl 🐉
Signature Malit From STS CARE - 5	I hereby certify that the information on this	s form is true and c	orrect to the best of my	knowledge.	
	Signature M	I From ST	SCARCIN		

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats. and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144. Wis Stats., failure to file this form may result in a forfeiture of not less than \$10,000 for each \$5000 for each day of violation. In accordance with ch. 147. Wis. Stats., failure to file this form may result in a forfeiture of not more than day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

JAN-11-1999	14:37	FROM	THE	RREEF	FUNDS
Department of Nanaral	Kesources				

TO

Ail 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					
Well/Drillhole/Borchole	Onginal Well Owner (If Known)							
Location	1 wawkersha	K	LEET	winds				
51.) 14 - 51.) 14 - 55 - 5		maa	a well Owner	T				
		Street	or Rouse					
Gov't Lot	Grid Number	125		JORMAN	- 			
Grid Location		City,	Scare Zip Co	de				
ft 🖸 N. 🖂 S.,	fL [] E. [] W.	γ	nelisa	ston in	53257			
Civil Town Name		Facility	Well No. an	d/or Name (II Ap	plicable) WI Unique Well No.			
Frankfield		1	1A-1					
Street Address of Well	1 V 1	Reason	a For Abando	ument				
- Theo is true	mound la		Juil Sai	<u>~ pb S</u>	· · · · · · · · · · · · · · · · · · ·			
		Usic o		$\frac{1}{12} \frac{1}{9}$				
WELL/DRILLHOLE/BOREHOLE	INFORMATION			11-17-0				
(3) Original Well/Drillhole/Borehole C	Construction Completed On	(4) Depuh	to Water (Fee	:t)				
(Date) 12 12	196	Pump	& Piping Ren	noved?	Yes No Not Applicable			
		Lincr(s) Removed?	ī	Yes No Not Applicable			
Monitoring Well	Construction Report Available?	Screen	Removed?		Yes No Not Applicable			
Water Well	Yes DNo	Casing	Left in Place	[?] D	Ya 🗍 No 🗌			
Drillhole	1	II No. I	-xplain					
and Borchole		Wre C	time Cut Off	Reiow Surface?				
Construction Type:		Did Se	aling Material	Rise to Surface?				
	(Sandaramit) Dug	Did Ma	uerial Scule A	fter 24 Hours?				
Other (Specify) Ha	ne Augur	lf Ye	s. Was Hole F	letopped?				
		(5) Require	d Method of	lacing Sealing N	datemal			
Formation Type:	-	Conductor Pipe-Gravity Conductor Pipe-Pumped Dump Bailer Other (Explain)						
Unconsolidated Formation	Bedrock							
Total Well Depth (fr.)	Casing Diameter (ins.)							
(From groundsurface)		Nea	L Cement Gro	ut	monitoring well borcholes only			
		Same	d-Canant (Co	ncreie) Grout				
Casing Depth (fL)		<u>مما []</u> (ande		Bentonite Pellets			
			-Sand Shary		Granular Bentonice			
Was Well Annular Space Ground?			tonite-Sand Si	ury	Bentonite - Cement Grout			
			pen senioniu		·			
(7) Sealing Materi	al Used	From (FL)	To (FL)	No. Yaras, Sacks Sealant	Mix Ratio or Mud Weight			
	······································			or Volume				
(DACCE +2)		Surface	0.2					
				<u> </u>				
Benton: te ch	29:2	0.2	1.5					
			[
			L					
				1				
			L	1				
(9) Name of Person or Firm Doing Seals	ing Work	(10)	FOR	DNR OR CO	OUNTY USE ONLY			
David Marker	2 /STS CONSULTINTS	Daie	Received/Inst	ected	District/County			
Signature of Person Doung Work	Date Signed							
Jail I Mal	12/12/196	Ren	ewer/Inspector	1				
Street or Route	Telephone Number							
11425 W lake York Dr	1 (414) 359 - 3030	Folk	w-up Nocess:	ту —				
Ciry. State, Zip Lode	5-2724							
I'M Wawkee US	JJ447							

JAN-11-1999	14:37	FROM	THE	RREEF	FUNDS
· Department of reasonal	KCSOUTCES				

TO -----

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.

(U) GENERAL INFORMATION			(2) FACILITY NAME					
Well/Drillhole/Barchole County			Ongenal Well Owner (If Known)					
Location	Whitesha	KKE	EF 'H	sido				
5W 1/4 of Sec.]		Presen	t Well Owner	1				
(If applicable)		Spreet	or Route					
Gov't Lot	Grid Number	25	む と.	Wiscon	JUN			
Grid Location		City, S	itale, Zip Co	de				
<u>ft. N S.,</u>	<u>ft.</u> <u>E.</u> <u>W.</u>	n	<u>Leven le</u>	(up , WI	53202			
Civil Iown Name		raciary		d/or Name (If Ag	plicable) WI Unique Well No.			
Brocheld		1	111 - 2					
Mar Alles of well	194			nment				
City Village	molingia	Date of	Ahendonme	mpus				
City			2/12/91	6				
WELL/DRILLHOLE/BOREHOLE	INFORMATION							
() Original Well/Drillhole/Borehole Co	onstruction Completed On	(4) Depth 1	o Water (Fee	:t)				
(Date) 12/12/96		Pump	L Piping Rem	noved?	Yes No Not Applicable			
		Lincr(s)	Removed?	F	Ya No Not Applicable			
Monitoring Well	Construction Report Available?	Screen	Removed?	Ц	Yes No Not Applicable			
Water Well	📓 Yes 🔲 No	Casing	Left in Place	?	Ya No			
Drillhole		If No. E	xplain					
		Was Casing Cut Off Below Surface?						
. . .								
Construction Type:		Did Sea	ling Malenai	Rise to Surface?				
	Sandpoint)	Conductor Pipe-Gravity Conductor Pipe-Pumped Dump Bailer Other (Explain)						
	A RUSE							
Formation Type:								
Unconsolidated Formation	Bedrock							
(Furn strundorfece)	asing Diameter (IIS.)	Next Compart Comut						
(-Cement (Ca	ncrete) Grout	monuming wen concloses only			
Casing Depth (fL)			rde		Bentonite Pellets			
			-Sand Sharry		Granular Benionite			
Was Well Annular Space Grouted?	🗌 Yes 🔲 No 🔲 Unknown	Bent	onice-Sand SI	Bentonite - Cement Grout				
If Yes, To What Depth?	Feet	Chip	ped Bentoniu	e !				
(7) Sapling Mar	l llead	Ener (En)	To (Fr)	No. Yaras.	Mix Patio or Mud Weight			
		FIUM (FC)	10(2)	or Volume	wirk warm of wirds weight			
Concrete		Surface	0.3					
			1	1				
15entonite		0.3	1.8					
and the second								
(d) Commenus:				L				
(9) Name of Person or Firm Doing Sealing	ng Work	(10)	FOR	DNR OR CO	DUNTY USE ONLY			
STS consulta	.nts	Date	Received/Insp	cored	District/County			
Signature of Person brang Work	Date Signed							
Dard 1 Mal	12/12/96	Revie	wa/Inspector	ſ				
Street or Route	Telephone Number							
11425 W Jake Park Or	1441 359-3030	Follo	w-up Neccasa	ТУ				
City, some Lip Code	53774							
JAN-11-1999 14:38 FROM THE RREEF FUNDS

TO

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) FACI	LITY NAME		
Well/Drillhole/Borehole	County	Ongu	al Well Owne	er (Lf Known)	
Location	DanteArg	1 25	EEF R	undo .	
542 14 45 224 455		Presen	a Well Owner		
			Pourto		
(It applications)			OF KOUSE		-
Coviliant				wouns	In .
		City.	No. 'D	ce	522.0
		Emplus	My war	$\int er \cdot i \int \int$	55662
Civil Iowa Name		(a .uu)	140 - 2	wor Mame (II Al	pucable) WI Unique Well No.
			114-5		
	No No	AC250	Sall		
	Lemouna in	Date	Abundance	samples	
		Date of	12 112 1	a(
WELL (DPULL HOLE/BOREHOLE	INFORMATION		121121	19	
(3) Original Well/Drillhole/Borehole C	onstruction Completed On	(d) Depth	10 Water (Fee	-()	
	2 / 6/	Dump 1			
(Date) (2(1	<u> </u>	Lincre	x riping Ken		
	Commission Report Available?	Scoren	Removed?	님	ICS NO Not Applicable
		Casing	Left in Place	, 님	
	End is: LINO	If No F	Fynlein	· U	
- Dimitale					
Borensie		Was Ca	sing Cut Off	Below Sunface?	
Construction Type		Did Sea	ling Material	Rise to Surface?	
		Did Ma	renial Settle A	fier 24 Hours?	
Other (Specify) Hand		Lí Ye	s, Was Hole R	letopped?	
		0.0	1.14		
Formation Type:		(5) Kequire	a Meinod of }	lacing Sealing N	latenal
Unconsolidated Formation	Beckrock		ductor Pipe-G	iravity 🔲 🤇	Conductor Pipe-Pumped
_		Dur	p Bailer		Other (Explain)
Total Well Depth (ft.)	asing Diameter (ins.)	(0) Scaling	Materials		For monitoring wells and
(from groundsurface)			t Cement Gro	ut	monitoring well borcholes only
			-Cemeni (Ca	ncrete) Grout	
Casing Depth (fL)			arae		Bentonite Pellets
			-Sand Shary		Granular Bentonite
Was Well Annular Space Grouted?		Ben	ionite-Sand Sl	urry	Benionite - Cement Grout
If Yes, To What Depth?		Chip	ped Bentonite	5	1
(7) Sealing Materia	al Lleeri	Emm (Et)	To (Et)	No. Yaras, Sacks Scalant	Mix Bario or Mud Weight
		11001(12)	10(12)	or Volume	
	10	Surface	02		
Concre			0.3		
Routinit		0.3	120		
Jentonik		V·3	0.0		
				1	1
]		1
(3) Comments:		1		1	L
10 Name of Person or Firm Daing Cash	ng Wort	100	FOP	DNR OR CO	OHNTY USE ONLY
STS (2051)		Date	Received/Inc	and a set	DispectCounty
	TDista Signard	Uale		~~~~	DistingCounty
Contraction of the state of the	12/12/96	Rem	wer/hussector	r	
Street or Route	Iciephone Number				
11425 W. Lake Park Dr	(414) 359-3030	Follo	W-UP Necess	EV	
City, State, Zip Code			······································		1
mil -	C2 224				

ТО

5232059 P.15



1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM Fax: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: HA-1 S-1 Sample Desc. : SOIL 0.2' TO 1.5' BGS Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209645 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

				Detection	Prep	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Lîmît	Method	Date	Method	Date	By
TOTSOLID	Total Solids	91	percent				SM2540G	12/16/1990	5 PHS
8260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	S RJN
	1,2-Dichloroethene	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	ND	ug/kg	. 25					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	92	%Recov	1					
	Toluene-d8 (SS)	98	%Recov	1					
	4-Bromofluorobenzene (SS)	88	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

ranceau



1795 Industrial Drive Green Bay. WI 54302 414-469-2436 800-7-ENCHEM FAX: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224

... chemistry for the environment

Lab Certification No. 405132750										
Location :	BROWNSTONE R	REEF/ #8513	4XA							
Your Sample ID:	MW-1 S-3									
Sample Desc. :	SOIL 5-71									
Sample Matrix :	SOIL	Date Colle	cted:	12/12/1996						
En Chem Proj# :	9612250	Date Receiv	ved :	12/13/1996						
En Chem Lab # :	209646	Date Report	ted :	12/17/1996						

Bill to: STS CONSULTANTS

Analysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
TOTSOLID	Total Solida	88	percent				SM2540G	12/16/1990	5 PHS
8260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1990	S RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	ND	ug/kg	25					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	96	XRecov	1					
	Toluene-d8 (SS)	102	XRecov	1					
	4-Bromofluorobenzene (SS)	91	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

Sa



1795 Industrial Drive Green Bay. WI 54302 414-469-2436 800-7-ENCHEM Fax: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: MW-1 S-5 Sample Desc. : SOIL 9-11¹¹ Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209647 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

Analysis	Parameter	Result	Units	Detection Limit	Prep Hethod	Prep Date	Analysis Method	Analysis A Date	nalyze By
									•••••
TOTSOLID	Total Solids	84	percent				SM2540G	12/16/1996	PHS
8260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	ND	ug/kg	25					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	94	%Recov	1					
	Toluene-d8 (SS)	101	%Recov	1					
	4-Bromofluorobenzene (SS)	88	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

stancean

5232059 P.18



1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM Fax: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certifica	ti	on No. 4051	32750		
Location	;	BROWNSTONE	RREEF/	#85134XA	
Your Sample I	D:	HA-2 S-1			
Sample Desc.	1	SOIL 1.3' T	0 1 .8 '	BGS	
Sample Matrix	:	SOIL	Date	Collected:	12/12/1996
En Chem Proj#	:	9612250	Date	Received :	12/13/1996
En Chem Lab #	:	209648	Date	Reported :	12/17/1996

Bill to: STS CONSULTANTS

Analysis	Parsmeter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyza By
TOTSOLID	Total Solids	94	percent				SM2540G	12/16/1996	5 PHS
8260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	5 RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	1200	ug/kg	26					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	94	%Recov	1					
	Toluene-d8 (SS)	100	XRecov	1					
	4-Bromofluorobenzene (SS)	89	%Recov	1					

"ND# Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

sourcean



1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM Fax: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: HA-3 S-1 Sample Desc. : SOIL 1.4' TO 2.0' BGS Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209649 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

				Detection	Prep	Ргер	Analysis	Analysis .	Analyze
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
TOTSOLID	Total Solids	94	percent	:			SM2540G	12/16/1996	PHS
8260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SV846 5030	12/16/1996	SW846 8260	12/16/1996	RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	2100	ug/kg	27					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	DN	ug/kg	25					
	Dibromofluoromethane (SS)	92	%Recov	1					
	Toluene-d8 (SS)	99	%Recov	1					
	4-Bromofluorobenzene (SS)	87	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

Durancean

Company Na	me: STS (on suit	ants .			CHAIN OF	P.O. #	Quote	# Din 14. Page / of Th
Branch or Lo	cation: milwautece		EN	AHE	M CUSTODY	Mail R	eport To: Mary	Silan
Project Conta	act: Mary Sila	a <u>'</u>		y	INC. CUSIODI	Compa	1117: 575 (ur	isuitanis +
Telephone:	414 359-303	0	1241 Be		9 2231 Catilo Ave., Suite 420	Addres	ss: 11425 W1	ake Park DI
Project Numb	ber: 85134XA		Green Br 414-469-2496	ay, WI 54302 5 • 1-800-736-24	Superior, WI 54980 36 715-392-5844 • 1-800-837-8238 ,	m.	Iwaskee w	<u>z 53224</u>
Project Name	: Brown Stone KRec	f ·	FAX 41	4-469-8827	FAX 715-392-5843	Invoice	To: Sam	<u>e</u>
Project Locat	tion:	مىرىيىتى <u>، مىرىيىتى م</u>		Med 600.827.55	So2 Deming Way Ison, WI 53717	Compa	any:	
Sampled By	(Print): David Marke	12		Fax:	608-827-5509	Addres	55:	
Regulatory P	Program (circle): UST RCRA	CLP SDWA	NR720 Conlin	mation Analysis	Required?		<u>.</u>	
NPDES/WP	DES CAA NR Other		(En Chem will	confirm unless	otherwise instructed.)	Mail In	voice To:	
Fleid ID	Sample Description	Collection Date Time S	Fleid Matrix	Fih'd Preserv' Y/N	Analysis Requested	Good Cond.	Total Comm Bottles	ents Laboratory
HA-1 5-1	Soil 0.2 to 1.5 BG	5 12/12/1 1:35	0.0 50:1	NIA F	TI-DCA 1,2 - DCA	X	1-502/m	9 20964
MW-1 5-3	soil 5-7' B65	12/11/4 9:30	0.0 50.10	NAF	1,1 - DCE , Trans - 1,2, D	ske,		209LAC
MW-1 5-5	So:1 9-11 BGS	12/n/4.100	0.0 501	N/A F)	TCE, 1,1,1-TCA, 1,1,2-TCA			209647
HA2	Soil 1.3-1.8'	12/12/44 18:418	0.0 50.1	NIA F	PCE Vigyl clacide			209648
HA-3 5-1	Soil 1.4-2.0'	17/11/1. 17/15	Jus Soil A	VIA F		N	X	209649
	+ no me	of bea	nk		··.			
	Pa							
						<u> </u>		
A=None D=HN03 G=NaOH	Preservation Code BeHCL C=H2SO4 E=EnCore F=Methanol** O=Other (Indicate)	Relinguished By:	xin		re; 17/06/0776 Received By: Received By: Received By:	All.	Juli 121-3196	En Chem Project No. 9612350 Sample Receipt Temp.
"If not usi cate volum the approp	ing En Chem's methanol, indi- na of methanol added and mark priate samples.	Relinquished By:	en	Date/Tim	13/4: 1.00 (r.W.) no: Referred By 319(0 1700) Kith	(En Cher	- izus Apt-	(Muat be reo'd at 4°C) - ROJ

53

May 1, 1997

Mr. John Fennimore The RREEF Funds 250 E. Wisconsin Ave. Milwaukee, WI 53202 MAY 2 1997

Re: Groundwater Sampling and Analysis at the Brownstones Shopping Center, Brookfield, Wisconsin -- STS Project No. 85217XA

Dear Mr. Fennimore,

STS Consultants, Ltd. (STS) collected a groundwater sample from the monitoring well at the Brownstones Shopping Center on April 4, 1997 in accordance with our proposal No. 5908MP.

The groundwater monitoring well is located near where a sewer line serving Dry Clean USA exits the building. This location was chosen to provide an indication of whether PCE had migrated preferentially through the coarser backfill of the sewer line. PCE is the dry cleaning solvent used by Dry Clean USA at the Brownstones Shopping Center. PCE was detected at 1200 μ g/kg and 2100 μ g/kg in two soil samples collected from interior cores conducted in December 1996 at the Dry Clean USA facility.

Approximately 8.4 feet of water were present in the well prior to purging. After measuring the depth of the water column, the well was purged of 5.5 well volumes at which point the water removed from the well was clear.

A sample of the water was collected for analysis for volatile organic compounds (VOCs) using a bottom discharging, disposable bailer. The sample was refrigerated and shipped under chain-of-custody to U.S. Filter/Enviroscan for analysis for halogenated and aromatic VOCs by U.S. EPA method 8021. Method 8021 includes tetrachloroethene (PCE) and its breakdown products.

The groundwater sample was analyzed on April 12, 1997 which was within the 14 day holding time allowed by the method. None of the chlorinated or aromatic VOCs, including PCE, were detected in the groundwater sample. A copy of the laboratory's analytical report is attached.

If you have any questions regarding the information contained herein, please contact us.

Sincerely,

STS CONSULTANTS, LTD.

Jane U. Ktth

Jane A. Kettler Project Chemist

©STS Consultants Ltd., May 1997

Throw W. Kroeger Dak

Thomas W. Kroeger Principal Hydrogeologist

STS Concultants Ltd. Consulting Engineers

11425 West Lake Park Drive Milwaukee, Wisconsin 53224 414,359,3030/Fax 414,359,0822

ΤО



U.S. FILTER/ENVIROSCAN 301 WEST MILITARY ROAD ROTHSCHILD, WI 54474

TELEPHONE 715-359-7226 FACSIMILE 715-355-3221

April 17, 1997

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

Attn: Jane Kettler

Re: 85217XA

Please find enclosed the analytical results for the samples received April 9, 1997.

All analyses were completed in accordance with appropriate EPA methodologies. Methods and dates of analysis are included in the report tables.

The chain of custody document is enclosed.

If you have any questions about the results, please call. Thank you for using US Filter/Enviroscan for your analytical needs.

Sincerely,

US Filter/Enviroscan

Jay C. Hunger

Jay C. Hunger Analytical Chemist

		=	1		_	
-61		Ξ	Ξ	Ξ		
	Ξ	Ξ		= =	=	Ξ

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

Attn: Jane Kettler

1

		Demost	101 1		
	7 - - / -	Reporting	MW-1		Date
	Units		04/04/9/	Qualifiers	Analyzed
BPA 8021					
Benzene	μg/l	0.5	X		04/12/97
Bromobenzene	µg/1	2.0	Х	CSH	04/12/97
Bromodichloromethane	$\mu q/l$	1.0	X		04/12/97
n-Butvlbenzene	$\mu q/l$	1.0	X	CSL	04/12/97
sec-Butylbenzene	$\mu g/1$	1.0	х		04/12/97
tert-Butvlbenzene	$\mu q/1$	1.0	X		04/12/97
Carbon Tetrachloride	$\mu q/1$	1.0	X	SPH	04/12/97
Chlorobenzene	$\mu q/1$	1.0	X		04/12/97
Chlorodibromomethane	µg/1	1.0	X		04/12/97
Chloroethane	$\mu g/l$	1.0	X	CSH	04/12/97
Chloroform	$\mu q/l$	1.0	X		04/12/97
Chloromethane	$\mu q/1$	2.0	X	CSH	04/12/97
o-Chlorotoluene	$\mu q/l$	1.0	X	CSH	04/12/97
n-Chlorotoluene	$\mu \alpha / 1$	2.0	X		04/12/97
1.2-Dibromo-3-chloropropane	$\mu q/1$	1.0	x		04/12/97
1.2-Dibromoethane	$\mu \alpha / 1$	1.0	х		04/12/97
1,2-Dichlorobenzene	$\mu q/l$	1.0	X		04/12/97
1 3-Dichlorobenzene	$\mu \alpha / 1$	1.0	X		04/12/97
1.4-Dichlorobenzene	$\mu \alpha / 1$	1.0	x		04/12/97
Dichlorodifluoromethane	$\mu q/l$	2.0	x		04/12/97
1 1-Dichloroethane	$\frac{1}{\sqrt{a}}$	1.0	x		04/12/97
1.2-Dichloroethane		1 0	x		04/12/97
1.1.Dichloroethylene	$\mu \alpha / 1$	1 0	x	CSH	04/12/97
cis-1 2-Dichloroethylene	ug/1	2 0	x	0011	04/12/97
trang-1 2-Dichlorosthylene	$\mu q/1$	1 0	x	SDH	04/12/97
2-Dichloropropage	$\frac{\mu q}{1}$	1 0	x	011	04/12/97
1,2-Dichioropropane	$\mu q / 1$	1.0	Ŷ		04/12/97
2.2-Dichloropropane	$\mu g/1$	2 0	Ŷ		04/12/97
Z, Z-DICHIOLOPIOPAHE	$\mu g/1$	1 0	x x		04/12/97
Burythenzene	$\mu g / 1$	1 0	Ŷ	CSH	04/12/97
TearrandioDucautene	$\mu g / 1$	1.0	Ŷ	Con	04/12/97
TeobropyTenzene	$\mu g / 1$	1.0	v v	CEL	04/12/97
Isopropyi Ether	$\mu g/1$	1.0	r v	COL	04/12/97
p-isopiopyicoidene	$\mu g/1$	1.0	A V	CET	04/12/9/
Methyl cert Butyl Ether	$\mu g/1$	2.0	A V	COL	04/12/97
Methylene chioride	$\mu g/1$	2.0	×	COL ODI	04/12/97
	$\mu g / 1$	1.0	A V	COL SPL	04/12/97
n-propyidenzene	$\mu g/1$	1.0	~ V		04/12/9/
	$\mu g / 1$	1.0	A V		04/12/9/
1,1,2,2-Tetrachioroethane	μg/1	1.0	X		04/12/9/
101uene	$\mu g/\perp$	1.0	A V	007	04/12/9/
1,2,3-Trichioropenzene	μg/1	1.0	A V	CST CST	04/12/9/
1,2,4-Tricniorobenzene	μg/1	1.0	А У	CSL	04/12/9/
1,1,1-Trichioroethane	μg/1	1.0	A V	SPH	04/12/9/
L, L, 2-IFICALUFOELAANE	μg/1 μg/1	T.U	A V	CCT	04/12/9/
ritenioroechytene	49/ 1	V.J	A	Сэл	04/12/9/

Analytical No.:

879

X = Analyzed but not detected.

UNITED STATES FILTER CORPORATION

XX

CUST NUMBER: 85217XA

DATE REC'D: 04/09/97 REPORT DATE: 04/17/97 PREPARED BY: JCH41/

SAMPLED BY: Client

REVIEWED BY: 10

J.S.

UNITED STATES FILTER CORPORATION

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

CUST NUMBER: 85217XA SAMPLED BY: Client DATE REC'D: 04/09/97 REPORT DATE: 04/17/97 PREPARED BY: JCHQUA REVIEWED BY:

Attn: Jane Kettler

	Units	Reporting Limit	MW-1 04/04/97	Qualifiers	Date Analyzed
EPA_8021_					<i>.</i>
Trichlorofluoromethane	µg/l	1.0	x	CSH	04/12/97
1.2.4-Trimethvlbenzene	$\mu q/1$	1.0	x		04/12/97
1 3 5-Trimethylbenzene	$\mu \alpha / 1$	1.0	x	CSH	04/12/97
Vinyl Chloride	$\mu q/1$	0.2	X		04/12/97
m- & p-Xvlene	$\mu q/1$	1.0	х		04/12/97
o-Xylene	μg/1	1.0	x		04/12/97
Analytical No :			879		

Analytical No.:

X = Analyzed but not detected.

Qualifier Descriptions

CSH	Check standard for this analyte exhibited a high bias. Sample results may also be biased high.
CSL	Check standard for this analyte exhibited a low bias. Sample results may also be biased low. Non-detects verified with a low standard comparison.
SPH	Matrix spike recovery within analytical batch was high. Sample matrix appears similar to your sample; result may be biased high.
SPL	Matrix spike recovery within analytical batch was low. Sample matrix appears similar to your sample; result may be biased low.

All Analyses conducted in accordance with U.S. Filter Quality Assurance Program.

Wisconsin Lob Certification No. 737053130/U S. Filter Corp., 301 W. Military Rd., Rothschild, WI 54474 Ph. (500) 338-7226 Fax (715) 355-3221

STSC CHAIN	। ऽतेः OF	5 C	ี่ บ :	५९ S T	ч« 'О	.5 y.? dy R	36 E (ๆ [^] こ () DR	D				Nº	270)29			53
Contact Person Phone No(<u>414) 3</u> Project No <u>8</u> 52 Project Name	lan 59-3 21771 Res	e h 030 A f -				nilwau MSK 30 Stone	<u>ke</u> 00	e 00			Spec	ial H	andling Request Rush Verbal Other	Labora Contac Phone Results	F tory t Person No s Due		WBEF EL	1 _ / THI Filty Coorte	
Sample I.D.	Dało	Time	Grab	Composite	No. of Containers	Sample Type (Water soil, eir, studge, etc.)	Preservation		Ambrent Sample	H	special Cond.		Analysis R	lequest			(In	Comments on S clude Major Cont	ampio aminants)
MW-1	4/4	11:30	X		3	Water	X	N		+			Voc 80	21			:10	00879	
and the second		 		-	ļ			_			_	+							
	+		┼─				$\left\{ -\right\}$	+		+		╋							
			<u> </u>			······	\square	\rightarrow				+-			- 10 ⁻				
	+	┢──		┢	┨───			-+				╋						<u></u>	<u> </u>
		<u> </u>	t	-	 		T	-		+									
Collected by: D	and	21	71	a~	1	Date 4/4	Iq.	1		Time	11:0	50	Delivery by:	2		Dale	4	8/97	Time Ph
Received by:				1		Date	r 			Time)		Relinquished by:			Date			Time
Received by:						Date				Time)		Relinquished by:			Date		1	Time
Received by:	0					Date				Time) 		Relinquished by:			Date			Time
Received for lab t	کېر : yy	ma	U	12		Date 4-5-	97			Time		U co	Relinquished by:			Date	<u> </u>		Time
aboratory Com	nents	Only:	: S	eals	s Inta	act Upon Rec	eip			I Yes		10							
nal Disposition:													Comments (Wea	ther Con	dilions, Pr	ecautions, H	azard	s):	
stribution: Original a	nd Greek	n - Labr	orato	iry `	Yellow	r-As needed F	řínk -	Trar	aporte	er G	oldenro	xd∙S	TS Project File						
Istructions to Laborate	ory: For	vard co	mple	oled (oligina	a 10 51 S with an	alytic	al re	sulls.	Retai	n grøði	n cop	у				CT.	S Consultant	9/94cp101
																	Co	nsulling Engir	Bers

5232059 P.25

é .

JAN-11-1999 14:42

FROM

THE RREEF FUNDS

Б



May 20, 1997

Mr. Michael Farley BRR Program Assistant Wisconsin Department of Natural Resources Box 12436 4041 N. Richards St. Milwaukee, WI 532212

Re: Dry Clean U.S.A. Facility, Brownstones Center, 17680 West Bluemound Road, Brookfield, Wisconsin FID# 268252050

Dear Mr. Farley:

The purpose of this letter is to inform you that Spic & Span, Inc., has/hired McLaren/Hart Environmental Engineering Corporation (McLaren/Hart) as the environmental consultant for the referenced site.

Please contact me, if you have any questions.

Sincerely,

Brian Schneider, P.E. Senior Engineer

10.080.5104.001.001



May 1, 1997



MAY 2 1997

. . .

Mr. John Fennimore The RREEF Funds 250 E. Wisconsin Ave. Milwaukee, WI 53202

Re: Groundwater Sampling and Analysis at the Brownstones Shopping Center, Brookfield, Wisconsin -- STS Project No. 85217XA

Dear Mr. Fennimore,

STS Consultants, Ltd. (STS) collected a groundwater sample from the monitoring well at the Brownstones Shopping Center on April 4, 1997 in accordance with our proposal No. 5908MP.

The groundwater monitoring well is located near where a sewer line serving Dry Clean USA exits the building. This location was chosen to provide an indication of whether PCE had migrated preferentially through the coarser backfill of the sewer line. PCE is the dry cleaning solvent used by Dry Clean USA at the Brownstones Shopping Center. PCE was detected at 1200 μ g/kg and 2100 μ g/kg in two soil samples collected from interior cores conducted in December 1996 at the Dry Clean USA facility.

Approximately 8.4 feet of water were present in the well prior to purging. After measuring the depth of the water column, the well was purged of 5.5 well volumes at which point the water removed from the well was clear.

A sample of the water was collected for analysis for volatile organic compounds (VOCs) using a bottom discharging, disposable bailer. The sample was refrigerated and shipped under chain-of-custody to U.S. Filter/Enviroscan for analysis for halogenated and aromatic VOCs by U.S. EPA method 8021. Method 8021 includes tetrachloroethene (PCE) and its breakdown products.

The groundwater sample was analyzed on April 12, 1997 which was within the 14 day holding time allowed by the method. None of the chlorinated or aromatic VOCs, including PCE, were detected in the groundwater sample. A copy of the laboratory's analytical report is attached.

If you have any questions regarding the information contained herein, please contact us.

Sincerely,

STS CONSULTANTS, LTD.

Jane U. Ktth

Jane A. Kettler Project Chemist

©STS Consultants Ltd., May 1997

Thomas W. Kroeger Alk

Thomas W. Kroeger Principal Hydrogeologist

STS Consultants Ltd. Consulting Engineers

11425 West Lake Park Drive Milwaukee, Wisconsin 53224 414.359.3030/Fax 414.359.0822



U.S. FILTER/ENVIROSCAN 301 WEST MILITARY ROAD ROTHSCHILD, WI 54474 TELEPHONE 715-359-7226 FACSIMILE 715-355-3221

April 17, 1997

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

Attn: Jane Kettler

Re: 85217XA

Please find enclosed the analytical results for the samples received April 9, 1997.

All analyses were completed in accordance with appropriate EPA methodologies. Methods and dates of analysis are included in the report tables.

The chain of custody document is enclosed.

If you have any questions about the results, please call. Thank you for using US Filter/Enviroscan for your analytical needs.

> e de la companya de l La companya de la comp

Sincerely,

US Filter/Enviroscan

Jay C. Hunger

Jay C. Hunger Analytical Chemist

~ y



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

Attn: Jane Kettler

CUST NUMBER: 85217XA SAMPLED BY: Client DATE REC'D: 04/09/97 REPORT DATE: 04/17/07 PREPARED BY: JCH4

REVIEWED BY: 1

		Reporting	MW-1		Date
	Units	Limit	04/04/97	<u>Qualifiers</u>	<u>Analyzed</u>
TD3 0001					
Benzene	$u \sigma / 1$	0 5	x		04/12/97
Bromobenzene	$\mu g/1$	2 0	x	CSH	04/12/97
Bromodichloromethane	$\mu g/1$	1 0	x	0011	04/12/97
n-Butylbenzene	$\mu g/1$	1.0	x	CSL	04/12/97
sec-Butylbenzene	$\mu g/1$	1.0	x		04/12/97
tert-Butylbenzene	$\frac{\mu g}{1}$	1.0	x		04/12/97
Carbon Tetrachloride	$\mu g / 1$	1.0	x	SPH	04/12/97
Chlorobenzene	$\mu \alpha / 1$	1.0	х		04/12/97
Chlorodibromomethane	$\mu q/l$	1.0	х		04/12/97
Chloroethane	$\mu q/l$	1.0	Х	CSH	04/12/97
Chloroform	$\mu q/l$	1.0	х		04/12/97
Chloromethane	$\mu q/1$	2.0	х	CSH	04/12/97
o-Chlorotoluene	$\mu q/1$	1.0	Х	CSH	04/12/97
p-Chlorotoluene	$\mu q/l$	2.0	Х		04/12/97
1,2-Dibromo-3-chloropropane	μg/1	1.0	Х		04/12/97
1,2-Dibromoethane	μg/l	1.0	Х		04/12/97
1,2-Dichlorobenzene	μg/l	1.0	Х		04/12/97
1,3-Dichlorobenzene	μg/1	1.0	Х		04/12/97
1,4-Dichlorobenzene	μg/l	1.0	Х		04/12/97
Dichlorodifluoromethane	μg/1	2.0	Х		04/12/97
1,1-Dichloroethane	μg/1	1.0	Х		04/12/97
1,2-Dichloroethane	μg/1	1.0	Х		04/12/97
1,1-Dichloroethylene	μg/l	1.0	Х	CSH	04/12/97
cis-1,2-Dichloroethylene	μg/1	2.0	Х		04/12/97
trans-1,2-Dichloroethylene	μg/l	1.0	Х	SPH	04/12/97
1,2-Dichloropropane	µg/l	1.0	Х		04/12/97
1,3-Dichloropropane	μg/l	1.0	Х		04/12/97
2,2-Dichloropropane	μg/l	2.0	Х		04/12/97
Ethylbenzene	μg/1	1.0	Х		04/12/97
Hexachlorobutadiene	μg/l	1.0	Х	CSH	04/12/97
Isopropylbenzene	$\mu g/l$	1.0	Х		04/12/97
Isopropyl Ether	μg/1	1.0	Х	CSL	04/12/97
p-Isopropyltoluene	μg/1	1.0	Х		04/12/97
Methyl tert Butyl Ether	μg/1	1.0	х	CSL	04/12/97
Methylene Chloride	μg/1	2.0	Х		04/12/97
Naphthalene	$\mu g/l$	1.0	Х	CSL SPL	04/12/97
n-Propylbenzene	μg/1	1.0	Х		04/12/97
Tetrachloroethylene	μg/1	1.0	Х		04/12/97
1,1,2,2-Tetrachloroethane	μg/1	1.0	Х		04/12/97
Toluene	μg/1	1.0	X		04/12/97
1,2,3-Trichlorobenzene	μg/l	1.0	X	CSL	04/12/97
1,2,4-Trichlorobenzene	μg/ <u>1</u>	1.0	X	CSL	04/12/97
1,1,1-Trichloroethane	μg/ <u>1</u>	1.0	X	SPH	04/12/97
1,1,2-Trichloroethane	μg/1	1.0	X	<u>~</u>	04/12/97
Trichtoroethylene	μg/1	0.5	Х	CSH	04/12/97

Analytical No.:

879

X = Analyzed but not detected.



04/12/97

04/12/97

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

Attn: Jane Kettler

	CUST NUMB SAMPLED B DATE REC' REPORT DA PREPARED REVIEWED	ER: 85217XA Y: Client D: 04/09/97 TE: 04/17/97 BY: JCHULL BY:
MW-1 04/04/97	Oualifiers	Date Analyzed
		<u></u>
х	CSH	04/12/97
х		04/12/97
х	CSH	04/12/97
х		04/12/97

EPA 8021

Trichlorofluoromethane μg/1 1.0 1,2,4-Trimethylbenzene 1.0 $\mu g/1$ 1,3,5-Trimethylbenzene $\mu g/1$ 1.0 Vinyl Chloride $\mu g/1$ 0.2 m- & p-Xylene $\mu g/l$ 1.0 o-Xylene μg/1 1.0

Analytical No.:

879

х

х

X = Analyzed but not detected.

Qualifier Descriptions

CSH	Check standard for this analyte exhibited a high bias. Sample results may also be biased high.
CSL	Check standard for this analyte exhibited a low bias. Sample results may also be biased low. Non-detects verified with a low standard comparison.
SPH	Matrix spike recovery within analytical batch was high. Sample matrix appears similar to your sample; result may be biased high.
SPL	Matrix spike recovery within analytical batch was low. Sample matrix appears similar to your sample; result may be biased low.

.

Reporting

Limit

Units

STSC	1 2751	mil 4548.5	4.36.91
CHAIN	OF (Custody	RECORD

№ 27029

Contact Person <u>lane Kettler</u> Phone Na(414)359-3030 Office <u>milwaukee</u> Project No. <u>85217×A</u> Porto. TASK 3000 Project Name <u>Reef</u> - Brown Stone												Special		ndling Request Rush Verbal Other	RECC Laboratory Contact Person Phone No Results Due	CORD NUMBER THROUGH U.S. Filty WILL ELCOOLE STD					
Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Mater, soil, air, studge, etc.)		N	Ambient Ambient	Sample di	d Dati	Special Cond.		Analysis F	Request	Cor (Include	mments on S ∋ Major Conti N S : ❤ O	ample aminants)			
MW-1	4/4	11:30	X		3	Water	X							Voc 80	21	21000					
			44																		
Collected by:	Jand.	z /	<u>/k</u>	2	1_	Date 4/4	<u> 9</u>	1		Ti	me	1:30		Delivery by:	2	Date 4/8	8/97	Time Ph			
Received by:		·		1		Date				Ti	me			Relinquished by:		Date		Time			
Received by:						Date				Ti	ime			Relinquished by:		Date	1	Time			
Received by:	<u> </u>				<u> </u>	Date				Ti	ime		_	Relinquished by:		Date		Time			
Received for lab	by: J.	ma	lt	12		Date 4-9-	97	,		Ti	ime /	11.00		Relinquished by:		Date		Time			
Laboratory Com	ments	Only:	S	eals	s Inta	act Upon Rec	eipt	!?			Yes	□ No		I N/A							
Final Disposition:														Comments (Wea	ather Conditions, Precau	tions, Hazards):					
Distribution: Original Instructions to Labora	and Greer tory: Forw	n - Labo vard cor	nple	ry Y ted o	ellow/ ellow/	- As needed F I to STS with an	'ink - alytic	Trar cal re	nspo sult	orter s. Re	Golo etain g	denrod - green co	- ST opy.	S Project File				9/94cp10k			
																STS C	onsultant	s Ltd.			

Consulting Engineers

53



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary Gloria L. McCutcheon, Regional Director Southeast Region Annex 4041 N. Richards Street, Box 12436 Milwaukee, WI 53212-0436 TELEPHONE 414-229-0800 FAX 414-229-0810

BRRTS# : 02-68-120075 Facility ID#: 268252050

BRR/ERP

April 10, 1997

SPIC & SPAN 4301 N RICHARDS ST MILWAUKEE WI 53212

SUBJECT: Reported Contamination at Dry Clean USA, 17680C W. Bluemound Rd., Brookfield

On 3-26-97 Mark Thimke of Foley & Lardner Attorneys informed the Department that chlorinated solvent caused soil contamination and potential groundwater contamination at the subject address.

Based on the information submitted to the Wisconsin Department of Natural Resources (WDNR), we believe you are responsible for restoring the environment at the referenced site under Section 292, Wisconsin Stats., known as the hazardous substances spills law. Utilizing information submitted to the Department, this case has been assigned an unknown ranking due to the lack of information concerning soil and groundwater contamination.

WDNR Southeast Region Prioritization and Scoring Policy

Due to the WDNR workload, it is necessary to rank all contamination cases for review priority. Lower priority cases do not have assigned project managers, however, responsible parties are required to proceed with investigation and clean-up efforts. Due to the lack of information about this site, its relative priority cannot be determined. Therefore, the priority ranking of this site is considered unknown. Until a priority has been assigned to this site, you should proceed with the required response work, submitting all plans and reports, along with quarterly status reports, to this office. The WDNR will notify you if your site will receive active oversight.

Your responsibilities include investigating the extent of the contamination and then selecting and implementing the most appropriate remedial action. Enclosed is information to help you understand what you need to do to ensure your compliance with the spills law.

The purpose of this letter is threefold: 1) to describe your legal responsibilities, 2) to explain what you need to do to investigate and clean up the contamination, and 3) to provide you with information about cleanups, environmental consultants, possible financial assistance, and working cooperatively with the Department of Natural Resources.

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative codes. The hazardous



substances spill law, Section 292.11 (3) Wisconsin Statutes, states:

* RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Codes chapters NR 700 through NR 728 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Chapter NR 708 includes provisions for immediate actions in response to limited contamination. Wisconsin Administrative Code chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

Steps to Take:

The longer contamination is left in the environment the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and to neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and administrative codes, you should hire a professional environmental consultant who understands what needs to be done. These are the first four steps to take:

1. By 5-23-97, please submit <u>written</u> verification (such as a letter from the consultant) that you have hired an environmental consultant. You will need to work quickly to meet this timeline.

2. By 7-6-97, your consultant must submit a workplan and a schedule for conducting the investigation. The consultant must follow the Department's administrative codes and our technical guidance documents. Please include with your workplan a copy of any previous information that has been completed (such as an underground tank removal report or a preliminary soil excavation report).

3. Please keep us informed of what is being done at your site. Submittal requirement timelines are dependent upon the contaminants of concern at the site. As described in Chap. NR 700.11, if the site meets the criteria for a "simple site", progress reports must be submitted semi-annually, beginning 6 months from the initial notification date. If the site meets the criteria for a "complex site", the site investigation report and a draft remedial options report must be submitted to the Department within 30 days of completion of both reports. Your consultant must clearly document the extent and degree of soil and groundwater contamination and submit a proposal for cleaning up the contamination.

4. For complex sites, per chapter NR 724.13(3), you or your consultant must provide us with a <u>brief</u> report at least every 90 days, starting after the remediation system begins operation. The reports should summarize the work completed since the last report. Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. However, please note that should conditions at your site warrant, you may receive a letter requiring more frequent contacts with the Department.

Due to the number of contaminated sites and our staffing levels in the WDNR Southeast Region, we will be unable to provide workplan approvals for investigations or remedial actions. To maintain your compliance with the spills law and chs. NR 700 through NR 728, do not delay the investigation and cleanup of your site by waiting for WDNR responses. We have provided detailed technical guidance

to environmental consultants. Your consultant is expected to know our technical procedures and administrative codes and should be able to answer your questions on meeting cleanup requirements.

Your correspondence and reports regarding this site should be sent to:

Michael Farley BRR Program Assistant Wisconsin Department of Natural Resources Box 12436 4041 N Richards St Milwaukee WI 53212

Unless otherwise requested, please send only one copy of plans and reports. To speed processing, correspondence should reference the BRRTS and FID numbers shown at the top of this letter.

Information for Site Owners:

Enclosed is a list of environmental consultants and some important tips on selecting a consultant. If you are eligible for reimbursement of costs under Wisconsin's PECFA program (see last paragraph) you will need to compare at least three consultants' proposals before hiring a consultant. Consultants and laboratories working in the PECFA program are required to carry errors and omissions insurance to help protect you against unsuitable work. Also enclosed are materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method. This information has been prepared to help you understand your responsibilities and what your environmental consultant needs to do. Please read this information carefully.

If you are interested in obtaining the protection of limited liability under s. 292, Stats., please contact Mark Giesfeldt at (608) 267-7562 or Darsi Foss at (608) 267-6713, in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 292 Stats., is available to persons who meet the definition of "purchaser" in s. 292 and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

Financial Information:

Reimbursement from the Petroleum Environmental Cleanup Fund (PECFA) is available for the costs of cleaning up contamination from eligible petroleum storage tanks. The fund is administered by the Department of Industry, Labor, and Human Relations (DILHR). Please contact DILHR at (608) 266-2424 for more information on eligibility and regulations for this program.

Thank you for your cooperation.

Sincerely,

Michael G. Farley Program Assistant 414-229-0808

cc: Rick Smith, McLaren-Hart; Mark Thimke, Foley & Lardner

Department of Natural Resources Type of Case: LUSTERP \times 453M 453P	BRRTS CASE TRACKING FORM SER Form #1 March 20, 1997
ACTIVITY NO. 2-68-120075	FID NO.: 268252050
County: <u>Wenkesha</u> Site Name: <u>Dvy Clean USA</u> Address: <u>17680 C.W. Bluemound Road</u> <u>Broobfield</u>	Initial Contact Date: $3 26 97$ RP Letter ?YXN_ Date Mailed: $4 10 97$ Closure Date: $7 13 00$
Municipality: V Legal Desc.: 1/4 1/4 SecTnRngE Lat.: Long.:	Person/Firm Reporting: <u>Mark Huimke</u> <u>Foley + Lavdrev</u> Phone! (4/4) <u>297-5832</u>
Priority: Funding Source: High RP Medium LTF Low EF Unknown SF Vour Initials Me Herror EPA Emergency Responsion Program NR 500 Solid Waste LUST Spills	Enforcement Authority: Spill Law s. 292.11 Wis. Stats. Envir. Repair Law s. 292.31 Wis. Stats. Solid Waste NR 500 CERCLA Aband. Container s. 292.41 Wis. Stats. Other: Wastewater (lagoons) Haz Waste NR600 : (L = Lead, S = Support)************************************
NR 600 Hazardous Waste Superfund RESPONSIBLE PARTY is a Company or/aPerson Company Name:	Environmental Repair CONSULTANT: Company Name: Mc C/aren-Hart Contact Name: Rick Smith or Mark Thimle Address: 790-1974 Phone: (414) 297-5832 CC: (EG: lab)
IMPACTS: (enter P for potential, K for known) Fire/Explosion Threat Contaminated Private Well(s) No. of Wells Contaminated Public Well P Groundwater Contamination	SUBSTANCES: #Tanks/containers Size Leaded Gas

FOLEY & LARDNER

ATTORNEYS AT LAW

FIRSTAR CENTER 777 EAST WISCONSIN AVENUE MILWAUKEE, WISCONSIN 53202-5367 TELEPHONE (414) 271-2400 FACSIMILE (414) 297-4900

Zec. 3/20/97

SACRAMENTO SAN DIEGO SAN FRANCISCO TALLAHASSEE TAMPA WASHINGTON D.C. WEST PALM BEACH

WRITER'S DIRECT LINE

414-297-5832

March 24, 1997

Mr. James Schmidt Department of Natural Resources 4041 N. Richards Street Milwaukee, WI 53212

> Re: Brownstones Shopping Center - Bluemound Road; Dry Clean USA: Notice of Discovery of Release

Dear Jim:

CHICAGO

JACKSONVILLE

LOS ANGELES MADISON

MILWAUKEE ORLANDO

We represent Spic and Span, Inc. (Dry Clean USA is a division of Spic and Span). Dry Clean USA operates a dry cleaning facility in the Brownstones Shopping Center. The facility is leased from RREEF. As part of a routine review of environmental conditions on property owned by RREEF an investigation of the Dry Clean USA facility was performed which involved soil borrings. Spic and Span was recently informed by RREEF that the investigation revealed the presence of low levels of perchloroethylene in the soil underneath the concrete in the area near the dry cleaning machine. Spic and Span has retained Rick Smith at McClaren-Hart to review the data and address the environmental issues. Please feel free to call Rick Smith or me with any questions.

Very truly yours,

Mark A. Thimke

cc: Robert Miller

FID 268389-77E

January 14, 1997

Mr. John Fennimore

E JAN 2 5 1999

JAN

16

1997

RREEF Funds 250 East Wisconsin Avenue Suite 925 Milwaukee, WI 53202

Re: Soil Analytical Results From the Hand Augers and Monitoring Well Installation at the Brownstones Shopping Center in Brookfield, Wisconsin -- STS Project No. 85134XA

Dear Mr. Fennimore:

This correspondence has been prepared to present the results of the soil analysis from the hand augers and groundwater monitoring well installation at the Dryclean USA facility located at Brownstones Shopping Center at 17430-17680 West Bluemound Road in Brookfield, Wisconsin. The Dryclean USA facility is located within the 17680 West Bluemound Road building. STS completed three hand augers and installed one monitoring well at the aforementioned site. Soil samples from each of the hand augers, plus the monitoring well, were analyzed for chlorinated volatile organic compounds (CVOCs).

Installation/Sampling of Groundwater Monitoring Well

One monitoring wells, MW-1, was installed at the subject site on December 12, 1996. The well was installed north of the 17680 building near where the sewer line serving Dryclean USA exits from the building. The well was installed in accordance with NR140 of the Wisconsin Administrative Code (WAC). The well location is indicated on the attached Figure 1.

The well was installed to a depth of 15 feet below ground surface (bgs). The boring was drilled using 4-1/4-inch diameter continuous flight hollow stem augers. The well was screened to intersect the groundwater table, with the screen interval from 5 to 15 feet below ground surface. The well was constructed of Schedule 40 PVC well screen and riser. A flush-mounted protector pipe was installed. The well is secured with a flushmount cover that requires a special tool to remove and the cap of the well pipe also has a lock to secure it. Soil sampling was performed every 2 feet while drilling for in-field screening, soil classification and laboratory analytical purposes. The soils were classified visually according to the Unified Soil Classification System (USCS). Soil cuttings generated during the drilling procedure were containerized in WDOT-approved 55-gallon drums and will be stored on-site until proper disposal is arranged.

STS Consultants Ltd. Consulting Engineers

11425 West Lake Park Drive Milwaukee, Wisconsin 53224 414.359.3030/Fax 414.359.0822 RREEF Funds STS Project No. 85134XA January 14, 1997



Soil samples were field screened with a 10.6 eV Photoionization Detector (PID) using the WDNR headspace method to evaluate the presence and degree of impacts, if any. Two soil samples from the well boring were submitted for laboratory analysis. One of the two was from the apparent water table surface. The second sample was from 5 to 7 feet below the ground surface (bgs) at the approximate elevation of the backfill for the sanitary sewer line.

The monitoring well has not yet been sampled because water has not yet collected in the well. STS checked the monitoring well for water on December 19, 1996 and January 3, 1997. STS continues to check for water at the monitoring well approximately once every two weeks. Groundwater elevations are expected to rise in the spring at which time, a water sample will collected from the well once water has collected and the well has been properly developed in accordance with NR140, WAC.

Hand Auger Sampling Procedures

Three hand augers were conducted on the subject property. One hand auger (HA-1) was performed north of the Dry Clean USA facility's rear exit door to determine if any spills of dry cleaning materials had occurred outside of the building. The other two hand augers (HA-2 and HA-3) were located to the north and the south of the dry cleaning machine at Dryclean USA to provide information of possible impacts from the dry cleaning practices at the facility. The locations of these hand augers are indicated on the attached Figure 1.

Coring through the tile and concrete for the interior hand augers and the asphalt pavement for the exterior hand auger was required to perform the hand augers. After the coring was completed a split-spoon soil sample was taken. The soil sample was taken at 0.2-1.5 feet bgs at HA-1. The soil sample was taken at 1.3-1.8 feet bgs at HA-2 and from 1.4-2.0 feet bgs at HA-3. All three of these soil samples were taken from the soils located below the base course.

Samples were split into two samples. One sample was used for field screening soil classification purposes. The second sample was place directly into the laboratory sample jars for analytical testing. Soil samples were field screened using WDNR headspace methods.

The hand auger equipment was decontaminated between boring locations using AlconoxTM and a distilled water rinse to prevent cross-contamination between soil sampling locations.

After the hand augers were completed, the boreholes were abandoned with bentonite chips to the bottom of the concrete or asphalt and filled with a concrete patch to the ground surface. The borehole abandonment forms are attached.

RREEF Funds STS Project No. 85134XA January 14, 1997



Laboratory Analysis

Soil samples were submitted to En Chem, Inc. Laboratory in Green Bay, Wisconsin for the analysis of select CVOCs. The CVOCs included were tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), trans-1,2-dichloroethene, 1,1,2-trichloroethene, 1,1-Dichloroethane, 1,2-dichloroethene and vinyl chloride. These CVOCs were analyzed by EPA Method 8240. The analytical results and the chain-of-custody form are attached.

Soil Description

A silty clay topsoil fill was encountered at the monitoring well, from 0-1 foot bgs. A silty sand and clay fill was present below the topsoil fill to 3 feet bgs. Buried topsoil consisting of a silty clay was present from 3 to 5 feet bgs. A silty clay was present from 5 feet to the terminal depth of the boring, 17 feet bgs. The soil collected at the hand auger locations was a silty clay and sand. The boring logs are attached.

Field Screening Results

Soil samples were screened at 2 foot intervals at the monitoring well location and the sample collected just below the base course at each hand auger location was screened with a PID meter. None of the samples collected had elevated PID readings (readings greater than 1 instrument unit).

Soil Quality

No CVOCs were detected in the soil samples collected from MW-1 or from HA-1, located outside the building. The soil samples collected at HA-2 and HA-3 both had significant concentrations of PCE. At HA-2 the sample had a PCE concentration of 1200 ug/kg approximately equivalent to parts per billion. The sample from HA-3 had a PCE concentration of 2100 ug/kg.

Recommendations

The investigation indicates that a release of PCE has occurred and that PCE is present under the floor slab of the Dryclean USA facility. The notification of this release should be reported to the WDNR. After the release is reported the WDNR will likely recommend an investigation to determine the extent of the affected soils.

~ *

RREEF Funds STS Project No. 85134XA January 14, 1997



The monitoring well will be monitored, developed and sampled as soon as water collects in the well. The groundwater collected from the well will be analyzed for the same parameters as the soils from the well.

General Qualifications

The results, conclusions and recommendations presented in this report are based upon the data obtained from the specific sampling locations and under the conditions stated in the report. Variations in the soil and groundwater conditions typically exist at most sites between sampling locations and at different times. This report has been prepared to aid our client in the evaluation of the groundwater conditions. This report should not be utilized for any purpose other than specifically stated.

We appreciate the opportunity to be of service to you. Please do not hesitate to contact us at (414)359-3030 if you have any questions or comments.

Respectfully,

STS CONSULTANTS, LTD

Mary J Siegan Mary L. Siegan, E.J.T.

Assistant Project Engineer

Attachments

©STS Consultants Ltd., January 1997

w g

Thomas W Koeger/mls Thomas W. Kroeger Principal Hydrogeologist



STS CONSULTANTS LTD., MILWAUKEE, WISCONSIN % \PHOJECTS\B5134\XA\G534A001 Mon Jan 06 13: 39: 24 1997 State of Wisconsin Department of Natural Resources

1. 2

Route To: Solid Waste Emergency Response Wastewater

	Haz. Waste
	Underground Tanks
	Water Resources
Ο	Other:

85134XA

								·					·····				Page 1 of
Facili 17680	ty/Proj) West l	ect Na Bluemc	ame ound Ro	ad			Licen	se/Pei	rmit/Mor	hitoring	g Numbe	er	Boring MW-1	Numbe	er		
Borin Wisco Andre	g Drilleo Insin Sc ew Guer	d By (bil Tes hther	(Firm na ting	ame and name of crew		Date 12/12,	Drilling /96) Starte	d	Date D 12/12/5	Drilling 96	Comple	ted [Drilling Method Solid Stem Auger			
DNR F	acility	Well N	lo. WI	Unique Well No.	Common Well Na MW-1	ime	Water	Level			Surface Elevation Borehole Diameter 4.25 inches						eter
Boring State SW 1/	g Local Plane 4 of Sk	tion v 1/4 c	of Sect	ion 28, T 7 N, R 20 E		Lat				Local <i>Feet</i>	Grid Lo S	ocation	(if ap	plicable eet W	:)		
Count Wauke	t y esha Co	ounty				DNR 0 68	County	Code	Civil To City of	wn/Ci Broo	ty/ or ' <i>kfield</i> , #	Village Viscon	sin				
Sa	mple												Soil	Prope	rties		
Number	Length Recovered (in)	Blow Counts	Depth in Feet	Soil/R And Ge Eac	ock Description ologic Origin For ch Major Unit			nscs	Graphic Log	Well Diagram	GID F ID	Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
1	8	7	E	Fill: Topsoil-silty c sand-brown-moist	lay, trace fine to	coars	se Г	CL			<1						
, 		8	<u> </u> 2.5	Fill: Silty sand and gravel-brown-mois	<1	0.5											
3	17	6	5	Topsoil: Silty clay, trace fine to coarse gravel-brown-moist <1 0.5													
4	24	15	7.5	Silty clay, trace si seams-brown to gr	It seams and fine ay-moist	sand	and										
5	24	19															
6	24	31						CL			<1	4.5+	-				
7	24	27	- 12.5					-			<1	4.5+	_				
8	24	26									<1	3.75	;				
Lborg		4. f 45	22.5	END OF BORING Groundwater monito feet on 12-12-96.	oring well installe	d to 16	5.0										
I here Signa	ture	tify th	iat the	$\frac{1}{2}$	rm is true and co	rrect t	Firm	best o	f my kno		ge.	<u> </u>	-) []		
This f than or bo	orm is a 810 nor th for e	more ach vi	ized by than \$5 iolation	Chapters 144.147 and 5,000 or each violation . Each day of continu	d 162, Wis. Stats. on. Fined not les ued violation is a	Comp s than separa	letion ste off	of this more ense,	report than \$1 pursuan	is mar 00 or t to s	ndatory impriso s 144.9	Pen ned no 9 and	alties: F ot less 162.06,	orfeit than 30 Wis, S	not les D days, tats.	S	

State Depar	of Wis tment	consi of Na	n atural	Resources	Route To: Solid Waste	I	🛛 Haz.	Waste				SC Fo	DIL BO rm 44	00-12	5 LOG 2	INFO	RMATION 7-91	
		' *			Emergency Responses Wastewater	onse l I	🛛 Unde 🗍 Wate 🗍 Other	rgroun r Reso r:	d Tanks urces	5					8	5134X	A	
Facili	ty/Proj	ect Na	ame und Ri	nad			Licen	ise/Pei	mit/Mor	nitoring) Numbi	er	Boring	Numbe	er		Page 1 of 1	
Boring STS (g Drilleo Consulta	i By (ants L	Firm n td.	ame and name of	of crew chief)		Date Drilling Started Date Drilling 12/12/96 12/12/96						Completed Drilling Method Hand Auger					
DNR F	acility	Well N	o. W	I Unique Well No	o. Common Well	Name	Wate	r Level			Surfac	e Elev	ation		Borehol 3.0 inct	e Diam nes	eter	
Boring State SW 1/	g Locat Plane 4 of Sh	ion 1/4 o	f Sec	tion 28, T 7 N, I	R 20 E		Lat Long	Local Grid Location (if applicab Feet S Feet W								le)		
Count Wauke	y esha Co	unty				DNR 68	County	Code	Civil To City of	own/Ci f Brooi	ty/ or k <i>field</i> , I	Village Viscons	sin					
Sar	nple												Soil Pro		Derties			
Number	Length Recovered (in	Blow Counts	Depth in Fee		Soil/Rock Descriptior And Geologic Origin Fo Each Major Unit	n or		nscs	Graphic Log	Well Diagram	PIDF ID	Compressive Strength	Moistur <i>e</i> Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments	
1	8		F	Asphalt pav	vement			CL/SF			<1							
			- 7.5 - 7.5 - 10 - 12.5 - 15 - 17.5 - 20 - 22.3 - 25 - 27.3	END OF BOI Backfilled w patch at su	RING with bentonite chips ar irface.	nd conc	rete											
I here	by cer tyre	tify th	at the	information on	this form is true and	correct	to the Firm	L Dest o	l f my kn		l ge.	Ita	NAS	ا عبك	<u>+</u> d	L		
than s	orm is a \$10 nor h for e	nuthori more ach vi	zed b than \$ olatior	y Chapters 144 5,000 for each h. Each oay of	.147 and 162, Wis. Sta violation. Fined not I continued violation is	ts. Com ess tha a sepa	npletion an \$10 o arate of	or this r more fense,	report than \$ pursuar	is mar 100 or ht to s	impriso s 144.9	r. Pena ned no 9 and	aities: F it less 162.06,	orfeit than 31 Wis. S	not les O days, itats.	S		

State of Wisconsin Department of Natural Resources

~ 7

Route To:

🛛 Wastewater

□ Solid Waste □ □ Emergency Response □

Haz. Waste
Underground Tanks
Water Resources
O 11 -

85134XA

						u	other	•									Page 1 of 1
Facility/Project Name 17680 West Bluemound Road						License/Permit/Monitoring Number				er	Boring Number HA-2						
Boring Drilled By (Firm name and name of crew chief) STS Consultants Ltd. DLM						Date Drilling Started 12/12/96			Date Drilling Completed 12/12/96		ted [Drilling Method Hand Auger					
DNR Facility Well No. WI Unique Well No. Common Well Name						Water Level Surface E				e Elevi	evation Borehole Diameter 3.0 inches				eter		
Boring Location State Plane SW 1/4 of SW 1/4 of Section 28, T 7 N, R 20 E							Lat	Local Grid Location (if applicable) .at ' Feet S Feet W .ong '					:)				
CountyDNRWaukesha County68						DNR 0 68	County	ounty Code Civil Town/City/ or Village City of Brookfield, Wisconsin									
Sample										[Soil	Prope	rties		
Number	Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Re And Ge Eac	ock Description ologic Origin For :h Major Unit			nscs	Graphic Log	Well Diagram	610 F 10	Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			_	Concrete under tile)			GP	•••								
			- 25	Base coarse				CL			<1						
	Concrete under tile gp · · · · · · · · · · · · · · · · · ·																
I here	by cer	tify th	at the	information on this fo	rm is true and co	orrect I	to the	i best o	l fmy kn	owled	ge.	I	l	L	1	<u> </u>	
Signa	ture MO	ų	Z	ien			Firm	575	<u> </u>	<u>m</u>	sult	ant	572-	Ld_			
This f than s or bot	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.																

State Jepa	e of Wis rtment	of Na	in atural F	Fesources [[[Route To:] Solid Waste] Emergency Respo] Wastewater	nse [] Haz.] Under] Water] Other	Waste rgroun ' Resoi :	d Tanks urces	6		SC Fc	DIL BO Drm 44	DRING 00-12	2 LOG 8	INF0 5134X	RMATION 7-91 A Page 1 of 1
Facility/Project Name 17680 West Bluemound Road						License/Permit/Monitoring Number				er	Boring Number HA-3						
Boring Drilled By (Firm name and name of crew chief) STS Consultants Ltd. DLM							Date 12/12,	Date Drilling Started 12/12/96			Date Drilling Comp 12/12/96		Comple	ted (d Drilling Method Hand Auger		
DNR Facility Well No. WI Unique Well No. Common Well Name							Water Level			Surface Elevation				Borehole Diameter 3.0 inches			
Boring Location State Plane SW 1/4 of SW 1/4 of Section 28, T 7 N, R 20 E							Lat Long	Local Grid Location (if applicable) Lat <i>Feet S</i> Feet W Long									
Count Wauki	ty esha Co	unty				DNR (68	County Code Civil Town/City/ c City of Brookfield				ty/ or ' k <i>field, k</i>	or Village d, Wisconsin					
Sa	mple												Soil	Prope	rties		
Number	Length Recovered (in)	Blow Counts	Depth in Feet	Su Ani	oil/Rock Description d Geologic Origin For Each Major Unit	r		uscs	Graphic Log	Well Diagram	PIDF ID	Compressive Strength	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			E	Concrete unde	er tile floor			GP	•••			_					
			2.5 7.5 10 12.5 15 17.5 17.5 20 22.5 22.5 22.5	Fill: Silty clay gravel-brown- END OF BORIN Backfilled with patch.	and fine to coarse s moist IG bentonite chips and	and an	d										
i nere Signar	Wie _	ury th			is form is true and C	urrect	Firm			owied	je. J						
~ 1	1101			J DOD DO				-11-	31	6 A	51.1	No.	. LC				

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 (to) 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.

DOC

د

State of Wisconsin Department of Natural Resources Env. Response	id Waste 🛛 Haz. Waste 🖂 & Renair 🔲 Undersmum		MONITORING WELL CONSTRUCTIO! Form 4400-113A Rev. 4-9
Facility/Project Name	Local Grid Location of We		Well Name
Brown Shoe REEF	ft .		mw-1
Facility License, Permit or Monitoring Number	Grid Origin Location		Wis, Unique Well Number - DNR Well Numbe
	Lat L	ong or	
Type of Well Water Table Observation Well 🛄 11	St. Plane fi	. N, ft. E.	Date Well Installed 12, 12, 96
Piezometer [] 12	Section Location of Waste/	Source	
Distance Well Is From Waste/Source Boundary	1/4 of 1/4 of Sec.	.T. N.R.	Well Installed By: (Person's Name and Firm)
ft.	Location of Well Relative (o Waste/Source	Andrew Quentur
Is Well A Point of Enforcement Std. Application?	u 🔲 Upgradient 🛛 🖬	Sidegradient	WISCORD IN THE
	d 🛛 Downgradient r	Not Known	101300151A J311 1-371A9
A. Protective pipe, top elevation f	L MSL	1. Cap and lock	Yes 🗋 No
B. Well casing, top elevation f		a Inside diam	der Soin
C Land surface elevation	LMSL .	b. Length:	
		c. Material:	Steel 04
D. Surface seal, bottom IL MSL or			Aluminum Other 2
12. USCS classification of soil near screen:	A south	d. Additional	protection? I Yes I No
GP GM GC GW SW SW S		If yes, desc	ribe: Expandaple Cap
		3 Surface seals	Bentonite 🚺 3(
			Concrete 0
	NO CON	X	Other 🖬 🖉
14. Drilling method used: Rotary	50	4. Material betw	een well casing and protective pipe:
Hollow Stem Auger	1		Bentonite 🔲 3 (
Other D			Annular space scal
	📓	·	None Other 🛛 🎆
Delling Mud Delling Mud Delling		5. Annular space	seal: a. Granular Bentonise 🛄 33
		bLbs/g	al mud weight Bentonite-sand shury 🔲 35
16. Drilling additives used?	т. 🔛	دLbs/g	al mud weight Bentonite shurry 🔲 31
		d%Be	ntonjite Bentonite-cement grout 🛛 50
Describe NA		e. <u>0.88</u>	Ft volume added for any of the above
17. Source of water (attach analysis):		£ How instal	led: Tremie 🛛 01
			Tremie pumped 0 02
			Gravity 208
	2	6. Bentonite sea	a. Bentonite granules [] 33
E. Bentonite seal, top ft. MSL or	→.º m (1)	$b_{1/4}$ in.	3/8 in. 1/2 in. Bentonite pellets 3 2
			Other 🛛 🧾
F. Fine sand, top IL MSL or	3.2 [™] \ ₩	\mathcal{D}_{1} fine sand mat	erial: Manufacturer, product name & mesh size
C Eilter nach ten A MSI or	40 #		
G. Filler pack, top		b. Volume ad	ded <u> </u>
U Somen init ton ft MSL or		8. Futer pack m	uerial: Manufacturer, product name and mesh siz
		a juc Fr	<u>5 72 53 575</u>
L Well bottom ft. MSL or /	SOft. S	0. Volume at	Firsh threaded BVC schedule 40 100 22
	==	y. wen easing.	Firsh threaded PVC schedule 40 E 23
I Filter pack bottom fL MSL or /	Loft_		
		10 Screen mater	
K. Borehole, bottom	7012 >>		
	X 🔯		
L. Borehole, diameter 80 in 56		a	
~ ~~	Spion simply	h. Mamufactur	Balrock Entropical
M. O.D. well casing 237 in.	Bourfille V Bonz	c. Slot size:	0.0 Chin
·····		d. Slotted ler	igth:A A
N. LD. well casing 206 in.		11. Backfill mater	ial (below filter pack): None 🐻 14
		R.Z.	-lint Snie Other []
I hereby certify that the information on this	form is true and con	rect to the best of my	knowledge.
Signature / //	/ Firm /~ c		
1) auic 7 1/aul	×1 512	· consulte	INTS

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

-----Form 3300-5B

I abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Imin. Code, whichever is applicable. Also, see instructions on back.

GENERAL INFORMATION	(2) FACILITY NAME
Well/Drillhole/Borehole County	Onginal Well Owner (If Known)
(i)(ii)(0))na	r Present Well Owner
She 1/4 of She 1/4 of Sec. <u>20</u> : T. <u>7</u> N R. <u>20</u> □	W
(If applicable)	Street or Route
Gov't Lot Grid Number	ad E Wischer
	$\mathbf{W} = \frac{1}{2} \sum_{i=1}^{n} \frac{1}{2} \sum_{i=1}^{$
Civil Town Name	Facility Well No. and/or Name (II Applicable) WI Unique Well No.
Prarkield	HA-1
Street Address of Well	Reason For Abandonment
City. Village	Date of Abandonment
City	12/12/96
ELL/DRILLHOLE/BOREHOLE INFORMATION	
Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet)
(Dave) [2] 12 196	Pump & Piping Removed? Yes No Not Applicable
Monitoring Well Construction Report Available?	Screen Removed?
	Casing Left in Place?
Drillhole	If No, Explain
Borehole	
Communica Trans	Was Casing Cut Off Below Surface? Yes No
Drilled Driver (Sentencies) Dug	Did Material Settle After 24 Hours?
Other (Specify) Hand Augur	If Yes, Was Hole Retopped? Yes No
	(5) Required Method of Placing Sealing Material
Formation Type:	Conductor Pipe-Gravity Conductor Pipe-Pumped
Unconsolidated Formation	Dump Bailer Other (Explain)
Total Well Depth (ft.) Casing Diameter (ins.)	(6) Sealing Materials For monitoring wells and
(From groundsurface)	Neat Cement Grout monitoring well boreholes only
Casing Depth (ft.)	
	Clay-Sand Shurry
Was Well Annular Space Grouted? 🛛 Yes 🗌 No 🔲 Unknow	wn Bentonite-Sand Slurry Bentonite - Cement Grout
If Yes, To What Depth? Feet	Chipped Bentonite
Sealing Material Used	From (FL) To (FL) Sacks Sealant Mix Ratio or Mud Weight
	or Volume
Concrete	Surface 0.2
Dentonite chips	0.2 1.3
Lomments:	
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY
Dawid Markerz /STS consultar	TS Date Received/Inspected District/County
Signature of Person Doing Work, Date Signed	
Juid J. 11/and 12/12/196	Reviewer/Inspector
Street or Koule / Helephone Number	Follow up Necessary
City, State, Zip Code	
mil when the up 57224	

Department of Natural Resources

Form 3300-5B

I abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Imin. Code, whichever is applicable. Also, see instructions on back.

GENERAL INFORMATION	(2) FACILITY NAME							
Well/Drillhole/Borehole County	Onginal Well Owner (If Known)							
Location Wantesha	KREF FUNDS							
$5 \times 1/4 \text{ of } 5 \times 1/4 \text{ of } 5 \times .2^{10} ; T. 7 \times R. 20 $	Present Well Owner							
(If applicable)	Street or Route							
Gov't Lot Grid Number	250 E. Wislmon							
Grid Location	City, State, Zip Code							
ft. [] N. [] S.,ft. [] E. [] W.	Mil waske 101 53202							
Civil Town Name	Facility Well No. and/or Name (If Applicable) WI Unique Well No.							
brochev								
TUBD I RI. D PI	Soll School S							
City, Village	Date of Abandonment							
City	12/12/96							
ELL/DRILLHOLE/BOREHOLE INFORMATION								
Original Well/Drillhole/Borehole Construction Completed On	(4) Depth to Water (Feet)							
(Date) 2 12 96	Pump & Piping Removed? 🗌 Yes 🗌 No 🗌 Not Applicable							
	Liner(s) Removed?							
Monitoring Well Construction Report Available?	Screen Removed?							
Water Well Yes No	Casing Left in Place? Yes No							
	II No, Explain							
Borchole	Was Casing Cut Off Below Surface?							
Construction Type:	Did Sealing Material Rise to Surface?							
Drilled Driven (Sandroint) Dug	Did Material Settle After 24 Hours? Yes No							
Other (Specify) Hand Augur	If Yes, Was Hole Recopped? Yes No							
	(2) Required Method of Placing Scaling Material							
Formation Type:	Conductor Pine Cravity Conductor Pine Durand							
Unconsolidated Formation 🔲 Bedrock	Dump Bailer Other (Explain)							
Total Well Depth (ft.) Casing Diameter (ins.)	(6) Sealing Materials For monitoring wells and							
(From groundsurface)	Neat Cement Grout monitoring well boreholes only							
	Sand-Cement (Concrete) Grout							
Casing Depth (fl.)	Concrete Bentonite Pellets							
	Clay-Sand Shurry Granular Benionite							
Was Well Annular Space Grouted? Yes No Unknown	Bentonite-Sand Slurry Bentonite - Cement Grout							
Sealing Material Used	From (FL) To (FL) Sacks Sealant Mix Ratio or Mud Weight							
Concrete								
Bentonite	0.3 1.8							
Comments:								
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY							
Similar of Person Hone Wark Ina S	Date Received/inspected District/County							
and 1 12 12 12 12 12	Reviewer/Inspector							
Street or Route Telephone Number								
1425 W lake Park Or (414) 359-3030	Follow-up Necessary							
City, State, Zip Code								
Milwhukee with 53274								

Department of Natural Resources

Street or Route

City, State, Zip Code

1425 W. lake Park Dr

Mil waykee uI

Telephone Number

53224

(414) 359-3030

Rev. 8-89

I abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Jmin. Code, whichever is applicable. Also, see instructions on back.

GENERAL INFORMATION	(2) FACILITY NAME
Well/Drillhole/Borehole County	Original Well Owner (If Known)
Location	RREEF Funds
	E Present Well Owner
5. 1/4 of 5. 1/4 of Sec. 20 : T. 7 N R. 20	W
(If applicable)	Street or Route
Gov't Lot Grid Number	25DE WISIMSIN.
Grid Location	City, State, Zip Code
<u>ft.</u> N. S.,ft. E. C	W Mil wanter, W 1 53202
Civil Town Name	Facility Well No. and/or Name (If Applicable) WI Unique Well No.
Brook wed	<u>I+A-3</u>
Street Address of Well	Reason For Abandonment
17630 W Bluemand Va	Joil Samples
City, Village	Date of Abandonment
<u>Citu</u>	12/12/96
ELL/DRILLHOLE/BOREHOLE INFORMATION	
Original Well/Drillhole/Borehole Construction Completed On	(4) Depih to Water (Feet)
(Date) 12/12/96	Pump & Piping Removed? Yes No Not Applicable
	Liner(s) Removed?
Monitoring Well Construction Report Available?	Screen Removed? 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:	Did Sealing Material Rise to Surface? TYes No
Drilled Driven (Sandpoint) Dug	Did Material Settle After 24 Hours? Yes No
Cher (Specify) Hand Augur	If Yes, Was Hole Recopped? Yes No
	() Required Method of Placing Scaling Material
Formation Type:	
Unconsolidated Formation	
	(b) Sections Meters to
Casing Diameter (ms.)	(0) Sealing Materials For monitoring wells and
(From groundsurface)	Meat Cement Grout monitoring well boreholes only
Color Death (5)	Sand-Cement (Concrete) Grout
Casing Depth (IL)	Concrete
	Clay-Sand Sturry
Was Well Annular Space Grouted? Yes No Unkno	wn Bentonite-Sand Slurry Bentonite - Cement Grout
If Yes, To What Depth? Feet	Chipped Bentonite
	No. Yards,
Sealing Material Used	From (FL) Io (FL) Sacks Sealant Mix Ralio or Mud weight
	Surface o
Concrete	Surface 0.3
Bentonite	0.3 0.0
Comments:	
Name of Person or Firm Doing Sealing Work	(10) FOR DNR OR COUNTY USE ONLY
STS Consultants	Date Received/Inspected District/County
Signature of Person Doing Work Date Signed	
Strick // larker 1 12/12/96	Reviewer/Inspector

Follow-up Necessary


1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM Fax: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224

wy

... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: HA-1 S-1 Sample Desc. : SOIL 0.2' TO 1.5' BGS Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209645 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

nalysis	Parameter	Result	Units	Detection Limit	Prep Method	Prep Date	Analysis Method	Analysis Date	Analyzed By
OTSOLID	Total Solids	91	percent				SM2540G	12/16/1996	PHS
260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	ND	ug/kg	25					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	92	%Recov	1			-		
	Toluene-d8 (SS)	98	%Recov	1					
	4-Bromofluorobenzene (SS)	88	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

Jurancean



1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM Fax: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: MW-1 S-3 Sample Desc. : SOIL 5-7' Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209646 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

~ 2

			Detection	Prep	Prep	Analysis	Analysis	Analyzed
Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
Total Solids	88	percent				SM2540G	12/16/1996	PHS
1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	RJN
1,2-Dichloroethane	ND	ug/kg	25					
1,1-Dichloroethene	ND	ug/kg	25					
trans-1,2-Dichloroethene	ND	ug/kg	25					
Tetrachloroethene	ND	ug/kg	25					
1,1,1-Trichloroethane	ND	ug/kg	25					
1,1,2-Trichloroethane	ND	ug/kg	25					
Trichloroethene	ND	ug/kg	25					
Vinyl chloride	ND	ug/kg	25					
Dibromofluoromethane (SS)	96	%Recov	1					
Toluene-d8 (SS)	102	%Recov	1					
4-Bromofluorobenzene (SS)	91	%Recov	1					
	Parameter Total Solids 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene trans-1,2-Dichloroethene Tetrachloroethene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Vinyl chloride Dibromofluoromethane (SS) Toluene-d8 (SS) 4-Bromofluorobenzene (SS)	ParameterResultTotal Solids881,1-DichloroethaneND1,2-DichloroethaneND1,1-DichloroetheneNDtrans-1,2-DichloroetheneNDtrans-1,2-DichloroetheneND1,1,1-TrichloroethaneND1,1,2-TrichloroethaneND1,1,2-TrichloroethaneNDVinyl chlorideNDDibromofluoromethane (SS)96Toluene-d8 (SS)1024-Bromofluorobenzene (SS)91	ParameterResultUnitsTotal Solids88 percent1,1-DichloroethaneNDug/kg1,2-DichloroethaneNDug/kg1,1-DichloroetheneNDug/kg1,1-DichloroetheneNDug/kgtrans-1,2-DichloroetheneNDug/kg1,1,1-TrichloroetheneNDug/kg1,1,2-TrichloroethaneNDug/kg1,1,2-TrichloroethaneNDug/kgVinyl chlorideNDug/kgDibromofluoromethane (SS)96 %Recov4-Bromofluorobenzene (SS)91 %Recov	ParameterResultUnitsLimitTotal Solids88 percent1,1-DichloroethaneNDug/kg251,2-DichloroethaneNDug/kg251,1-DichloroethaneNDug/kg251,1-DichloroetheneNDug/kg25trans-1,2-DichloroetheneNDug/kg251,1,1-TrichloroetheneNDug/kg251,1,2-TrichloroethaneNDug/kg251,1,2-TrichloroethaneNDug/kg25Vinyl chlorideNDug/kg25Dibromofluoromethane (SS)96 %Recov14-Bromofluorobenzene (SS)91 %Recov1	DetectionPrepParameterResultUnitsLimitMethodTotal Solids88 percent1,1-DichloroethaneNDug/kg25SW846 50301,2-DichloroethaneNDug/kg251,1-DichloroethaneNDug/kg251,1-DichloroethaneNDug/kg25trans-1,2-DichloroetheneNDug/kg251,1,1-TrichloroethaneNDug/kg251,1,2-TrichloroethaneNDug/kg251,1,2-TrichloroethaneNDug/kg25Vinyl chlorideNDug/kg25Dibromofluoromethane (SS)96 %Recov14-Bromofluorobenzene (SS)91 %Recov1	DetectionPrepPrepParameterResultUnitsLimitMethodDateTotal Solids88 percent1,1-DichloroethaneNDug/kg25SW846 503012/16/19961,2-DichloroethaneNDug/kg2512/16/19961,1-DichloroethaneNDug/kg2512/16/19961,1-DichloroethaneNDug/kg2512/16/19961,1-DichloroetheneNDug/kg2512/16/19961,1,1-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,1,2-TrichloroethaneNDug/kg2511/11,2,2,2,3,3,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4	ParameterResultUnitsLimitMethodDateMethodTotal Solids88 percentSM2540G1,1-DichloroethaneNDug/kg25SW846 503012/16/1996 SW846 82601,2-DichloroethaneNDug/kg2512/16/1996 SW846 82601,2-DichloroethaneNDug/kg2512/16/1996 SW846 82601,1-DichloroethaneNDug/kg2512/16/1996 SW846 82601,1-DichloroetheneNDug/kg2512/16/1996 SW846 82601,1-DichloroetheneNDug/kg2514/16/1996 SW846 82601,1,1-TrichloroethaneNDug/kg2514/16/1996 SW846 82601,1,2-TrichloroethaneNDug/kg2514/16/1996 SW846 82601,1,2-TrichloroethaneNDug/kg2514/16/1996 SW846 8260Vinyl chlorideNDug/kg2514/16/1996 SW846 8260Dibromofluoromethane (SS)96 %Recov114/16/1996 SW846 82604-Bromofluorobenzene (SS)91 %Recov114/16/1996 SW846 8260	DetectionPrepPrepAnalysisAnalysisParameterResultUnitsLimitMethodDateMethodDateTotal Solids88percentSM2540G12/16/19961,1-DichloroethaneNDug/kg25SW846 503012/16/1996SW846 826012/16/19961,2-DichloroethaneNDug/kg2512/16/1996SW846 826012/16/19961,1-DichloroethaneNDug/kg2512/16/199612/16/19961,1-DichloroethaneNDug/kg2512/16/19961,1,1-TrichloroethaneNDug/kg2512/16/19961,1,2-TrichloroethaneNDug/kg2512/16/19961,1,2-TrichloroethaneNDug/kg2512/16/1996Vinyl chlorideNDug/kg2512/16/1996Dibromofluoromethane (SS)96%Recov1Toluene-d8 (SS)102%Recov14-Bromofluorobenzene (SS)91%Recov1

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

rancean



1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM Fax: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: MW-1 S-5 Sample Desc. : SOIL 9-11' Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209647 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

				Detection	Ргер	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
OTSOLID	Total Solids	84	percent				SM2540G	12/16/1996	5 PHS
3260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	5 RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	ND	ug/kg	25					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	94	%Recov	1					
	Toluene-d8 (SS)	101	%Recov	1					
	4-Bromofluorobenzene (SS)	88	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

sancean



1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAx: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: HA-2 S-1 Sample Desc. : SOIL 1.3' TO 1.8' BGS Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209648 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

~ 7

				Detection	Prep	Prep	Analysis	Analysis	Analyzed
Analysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
OTSOL ID	Total Solids	94	percent				SM2540G	12/16/1996	PHS
3260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	1200	ug/kg	26					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	94	%Recov	1					
	Toluene-d8 (SS)	100	%Recov	1					
	4-Bromofluorobenzene (SS)	89	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

marcan



1795 Industrial Drive Green Bay, WI 54302 414-469-2436 800-7-ENCHEM FAx: 414-469-8827

Report to: STS 11425 WEST LAKE DRIVE MILWAUKEE, WI 53224 ... chemistry for the environment

Lab Certification No. 405132750 Location : BROWNSTONE RREEF/ #85134XA Your Sample ID: HA-3 S-1 Sample Desc. : SOIL 1.4' TO 2.0' BGS Sample Matrix : SOIL Date Collected: 12/12/1996 En Chem Proj# : 9612250 Date Received : 12/13/1996 En Chem Lab # : 209649 Date Reported : 12/17/1996

Bill to: STS CONSULTANTS

~ 7

				Detection	Prep	Prep	Analysis	Analysis	Analyzed
nalysis	Parameter	Result	Units	Limit	Method	Date	Method	Date	Ву
OTSOLID	Total Solids	94	percent				SM2540G	12/16/1996	5 PHS
260+-S-ME	1,1-Dichloroethane	ND	ug/kg	25	SW846 5030	12/16/1996	SW846 8260	12/16/1996	5 RJN
	1,2-Dichloroethane	ND	ug/kg	25					
	1,1-Dichloroethene	ND	ug/kg	25					
	trans-1,2-Dichloroethene	ND	ug/kg	25					
	Tetrachloroethene	2100	ug/kg	27					
	1,1,1-Trichloroethane	ND	ug/kg	25					
	1,1,2-Trichloroethane	ND	ug/kg	25					
	Trichloroethene	ND	ug/kg	25					
	Vinyl chloride	ND	ug/kg	25					
	Dibromofluoromethane (SS)	92	%Recov	1					
	Toluene-d8 (SS)	99	%Recov	1					
	4-Bromofluorobenzene (SS)	87	%Recov	1					

"ND" Indicates no detectable analyte at or above the listed detection limit. All results reported on a dry weight basis. All subcontracted analyses are performed by Wisconsin DNR certified laboratories.

Jurancean

Company Na	ame: STS (Un Sul	tan15		ł	1			CHAIN OF	P.O. #		Quote #	CVIN-145	Page of ! 1/
Branch or Lo	$ \mathbf{E} $		``æ	HE	CHAR OF CUSTODY	Mail Report To: Mary Sirgan							
Project Conta		-7	>Z		INC. CONTODI	Comp	any:	<u>STS (01</u>	Sutar1	<u>s</u> .			
Telephone:	414 359-30	30			1241 Bellevue St., Suite 9 2231 Catlin Ave., Suite 420						25 W 10	ike Par	n Dr
Project Num	ber: 85134XA			414	Green 4-469-24	Bay, WI 36 • 1-80	54302 00-736-2	Superior, WI 54880 436 715-392-5844 • 1-800-837-8238	m	INA	sky ut	<u>i 532</u>	124
Project Name	e: Brown Stone KRei	f f			FAX	414-469	-8827	FAX 715-392-5843	Invoic	e To:	Same	2	
Project Loca	tion:					ei	ليا Ma	Madison, WI 53717 Company:					
Sampled By	(Print): David Mark	e 1 <u>7</u>					Faj	x: 608-827-5503	Addre	SS:			
Regulatory P	Program <i>(circle)</i> : UST RCRA	CLP SDV	VA	NR7	20 Conl	irmation	Analysi	s Required?					
NPDES/WP	DES CAA NR Other_			(En	Chem w	vill confir	m unles	s otherwise instructed.)	Mail I	nvoice To):		
Field ID	Sample Description	Colle Date	ection Time	Field Screen	Matrix	Filt'd Y/N	Preserv*	Analysis Requested	Good Cond.	Total Bottles	DED ARIEA EOR LA Comme	IBORATORY U	Laboratory Number
HA-1 5-1	Soil 0.2 to 1.5 BG	s Izlinda	1.15	0.0	50:1	NIA	F	$\Pi - DCA = 1.2 - DCA$	X	1-5	02/m		9 209645
MW-1 5-3	soil 5-7' B65	iz In la	9:30	0.0	55:1	NA	F	1,1 - DCE , Trans - 1,2, D	٤٤,	1			209(A6
MW-1 5-5	Soil 9-11 BGS	12 Inic	. 10° av	0.0	Suil	NA	F	TCE, 1,1,1-TCA, 1,1,2-TCA	1				209647
HA2	Soil 1.3-1.8'	12/12/4	11.48	0.0	50.1	NA	F	PCE Vie VI Cloride					209648
HA-3 5-1	Soil 14-2.0'	17/12/	(120	5 0.0	Soil	NIA	F			X			209649
													· · · · · · · · · · · · · · · · · · ·
	* no me	al	f.X	in	b								
	Ra										,		
			\geq										
A=None D=HN03 G=NaOH	*Preservation Code B=HCL C=H2SO4 E=EnCore F=Methanol** O=Other (Indicate)	Relinguished E	y Ut	4.i.	nC. 1.	/	Date/Tir Date/Tir	ne; IT/UG/UG/UG/UG/UG/UG/UG/UG/UG/UG/UG/UG/UG/	hl	121	3196	En Chem Pi 96/6 Sample Rec	roject No. 2 3 5 0 zeipt Temp.
**If not usi cate volum the approp	ng En Chem's methanol, indi- ne of methanol added and mark priate samples.		ech	en			イリ Date/Tir しつしい	13/44 1. 00 (.r. W.c ne: Received By 3/9(, 1700)	En Cher	~ A	1305	ROJ	f