WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District - Annex Building
Post Office Box 12436
4041 N. Richards St.
Milwaukee, Wisconsin 53212
TELEPHONE: 414-961-2727
TELEFAX #: 414-961-2770

June 23, 1994

File Ref: FID# 241169940
ERR/ERP
Milwaukee Co.

Ms. Ann Thoma
7936 W. Hampton Avenue
Milwaukee, Wisconsin 53218

Dear Ms. Thoma:

RE: Soil Investigation and Remediation at 2101-13 W. Wells Street
Milwaukee, Wisconsin

In June 1993, the Wisconsin Department of Natural Resources (WDNR) was notified that soil contamination was discovered during a soil boring investigation conducted at the above referenced location. Soils contaminated with tetrachloroethylene (PCE) were found under and around the building foundations at 2107 W. Wells, extending also under the property at 2105 W. Wells and approximately ten (10) feet beyond these properties to the south. Since that time, remediation efforts were undertaken at the site, and documentation of the investigation and remediation were submitted to the WDNR for review. The purpose of this letter is to provide the requested review decision.

The WDNR proceeds in contamination cases under the authority of s. 144.76, Wisconsin Statutes, commonly referred to as Wisconsin's Hazardous Substance Spill Law. The definition of "hazardous substance" as found in s. 144.01(4m), Wisconsin Statutes, includes any discharged solid, semisolid, liquid or gaseous substance, such a tetrachloroethylene, that can cause harm to the environment or human health.

Wisconsin Statute 144.76(2a) states: "A person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance shall notify the Department immediately of any discharge not exempt under sub. (9)."

Wisconsin Statute 144.76(3) states: 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 this state."

Because you are the legal owner of a property where a hazardous substance has been released to the environment, the WDNR identifies you as the party responsible for taking the actions necessary to restore the environment.

The following submittals were made available to the WDNR for review of the investigation and remediation of this contamination:

- Letter RE: "Solvent Impacted Soils at 2111 West Wells Street, Milwaukee, Wisconsin", dated June 10, 1993.
- "Construction Documentation Report, Demolition and Soil Remediation, 2101-2113 West Wells Street, Milwaukee, Wisconsin", dated October 29, 1993.

Based on our initial review, the WDNR requested and received additional information from STS to clarify the above listed reports. This information was submitted on June 20, 22 and 23, 1994 and included analytical results and descriptive information for seven borings done at the site, a letter clarifying the excavation progression and verification sampling and analytical results for test pits 1, 2 and 3.

The information submitted indicates that contaminated soil at the site has been remediated. **No further action is required for the PCE soil contamination at this site.** If additional environmental problems are encountered at the site in the future, the WDNR may require additional action. Please note that this letter does not constitute Department "certification" under s. 144.765(2)(a)3, Stats., as created by 1993 Wisconsin Act 453 (May 12, 1994). Persons who meet the definition of "purchaser" in s. 144.765(1)(c), Stats. must receive Department pre-approval prior to conducting a site investigation in order to be eligible for the liability exemption under s. 144.765, Stats.

The WDNR appreciates the efforts you have taken to address the soil contamination on your properties. If you have any questions about this letter, please contact me at (414) 961-2726.

Sincerely,
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Pamela A. Mylotta
Hydrogeologist, Environmental Repair Program
Southeast District

c: Jon Herreman - O'Neil, Cannon & Hollman, S.C.
Tom Krueger - STS Consultants
SED Casefile

WEST WELLS STREET

~118'

SIDEWALK

2113

2111

2107

~~2107~~

2115 W. WELLS STREET

EXISTING BUILDING NOT TO BE RAISED

SOIL SAMPLES COLLECTED ON AUGUST 25, 1993

S-5, S-6, S-7, S-8, S-13, S-15 AND S-16

SOIL SAMPLES COLLECTED ON OCTOBER 5, 1993

TP-4, TP-5 AND TP-6

B-2 + NA

2101-2113 WEST WELLS ST. COMPLEX

2101-2105

LIMIT OF CONTAMINATED SOIL REMOVAL

This soil removed (additional 1.5' below original excavation)

B-1 + NA

S-6 BQL

B-3 + NA

S-7 18000

S-5 BQL

TP-4 BQL

S-13 1200

TP3-BQL

B-4 + 2100 (0-0.5') (1-8')

S-8 BQL

TP-5 BQL

B-6 7380 (5-5.5') 8 (12.5')

B-7 + 96 (5-5.5')

S-15 25

B-5 + NA

S-16 3300

TP2 BQL

TP-6 BQL

TP-1 BQL?

30'

4'

~51'

47'

SIDEWALK (REMOVED)

RETAINING WALL (REMOVED)

NORTH 21ST STREET

SOIL SAMPLES S-7, S-13, S-15 AND S-16 HAD DETECTS FOR PCE

SCALE IN FEET

10 5 0 10

N

values = PCE concentration (ug/kg)

BQL = 1.1 ug/kg on clean "S" samples

BQL = 1.4 ug/kg on clean "TP" samples

NA = No Analysis submitted

WDNR Review Notes - 6/94

LEGEND

- S-6 — SOIL SAMPLE LOCATION
- TP-6 — SOIL SAMPLE LOCATION
- WATER LATERAL
- SEWER LATERAL
- GAS LATERAL
- APPROXIMATE LIMITS OF CONTAMINATED SOILS

DRAWN BY	AUTOCAD FILE
J.M.I.	84161002
DATE	CHK. BY
6/21/93	MEM/TGR
APPROVED BY	
T.W.W.	

REVISION	DATE	BY

DOCUMENTATION OF CONTAMINATED SOIL REMOVAL
2101-2113 WEST WELLS STREET
MILWAUKEE, WISCONSIN

STS Consultants, Ltd.
Consulting Engineers

84161XF

1" = 10'

1

24/169940
ERR/ERP

Checker Cleaners
(Thoma Property)
2105 ~~THOMA PROPERTY~~ / Checker Cleaner site
~~2105~~ W WELLS ST.
MILWAUKEE

Site Screening Worksheet

Answering yes to any of the questions below indicates the site has a high potential of causing or threatening to cause environmental pollution (mark yes in Box V. on form 4430-4).

1. Evidence (attributable to site) of groundwater within 1200 feet exceeding a preventive action limit (PAL) for any substance of public health concern or public welfare concern listed in ss. NR 140.10 and 140.12. Yes [] No [X]

2. Evidence (attributable to site) of surface water within 1200 feet exceeding water quality standards contained in chs. NR 102, 103 and 104. Yes [] No [X]

3. Evidence (attributable to site) of air within 1200 feet exceeding air quality standards contained in chs. NR 400 to 499. Yes [] No [X]

4. Qualitative analysis of: Size of site, depth to groundwater, surface and underlying soils, distance to nearest private or public water supply, population within ¼ mile, type or characteristics and volume of waste, proximity to protected natural resources or environments, or **any other appropriate factors.** Some examples:

   a. Waste disposal area is less than 5 acres and nearest water supply used for human consumption is within 600 feet.

   b. Waste disposal area is between 5 and 10 acres and nearest water supply used for human consumption is within 1200 feet.

   c. There is insufficient (less than 5 feet) confining layer of silt or clay separating the bottom of the site from bedrock or groundwater table.

   d. There is a significant amount of hazardous material at the site.

   e. There is a protected natural resource or environment nearby.

No groundwater analysis done.
→ GW at site on 11th + Wis' indicates gw levels of 8' bgs.

Based on the above, is there a reason to believe the environment and/or public health is at risk of contamination at this site? Yes [] No [] Unknown [X]

If Yes, then site shall be classified High Potential under ss.144.442 or ss.144.76. Unanticipated environmental consequences at a landfill fall under ss.144.442. Most other significant releases of hazardous materials fall under 144.76.

ss.144.442 []
ss.144.76 []

6/22/93

FID 241169940
ERR/ERP

June 22, 1994

Ms. Pam Mylotta
Wisconsin Department of Natural Resources
Richard Street Annex
4041 N. Richards Street
P.O. Box 12436
Milwaukee, Wisconsin 53212

RE: 2101-2113 W. Wells Street -- STS Project No. 84161XF

Dear Ms. Mylotta:

This letter has been prepared to provide you with the information you requested in our telephone conversation on June 20, 1994. Specifically, this letter 1) outlines the general progression of events during the affected soil removal, 2) summarizes the field screening results performed during the investigation and 3) clarifies the depths of the confirmation samples obtained from the final excavation limits.

Progression of Events

1) STS concluded from the soil investigation that the affected soils were generally found within 2 feet of the southern portion of the basement floor slab at the 2111 W. Wells property. On August 25, 1993, following floor slab removal, two feet of the soil beneath the floor slab were excavated (to approximately nine to ten feet below surrounding surface grade) in this area and transported to the landfill for disposal. The approximate limits of the excavation on that day are indicated on the enclosed figure.

2) Samples Nos. 1 through 17 were collected from the limits of the excavation. The soil samples were screened with a photoionization detector equipped with a 10.0 - 10.6 eV lamp. The summary of the PID screening results is enclosed with this letter. The highest PID headspace reading observed was 3 instrument units (IU). Based on the PID screening results, it appeared that affected soils had been excavated.

3) Seven of the 17 soils samples (Nos. S-5, S-6, S-7, S-8, S-13, S-15 and S-16) were submitted for laboratory analysis for confirmation that the affected soils were excavated. Samples S-7, S-13, S-15 and S-16 had tetrachloroethylene (PCE) concentrations above the laboratory detection limits. Based on the analysis, it appeared that the affected soils had been adequately removed on the western portion of the excavation, but remained on the eastern portion.

STS Consultants Ltd.
Consulting Engineers

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

4) Because the PID screening results did not correlate well with the PCE concentrations, test pits TP-1 through TP-3 were excavated on September 2, 1993, to investigate the extent of PCE before further excavation. Copies of the logs are included with this letter and the locations of the test pits are indicated on the attached figure. All samples from the three test pits had PID readings of less than 1 IU. Samples from 10 feet below ground surface, the approximate elevation at which affected soils were observed in the previous excavation, were submitted for laboratory analysis. Tetrachloroethylene was below the laboratory detection limit in samples from all three test pits, indicating that the lateral and vertical units of the PCE-affected soils had been defined.

5) On October 5, prior to excavating the remaining affected soils, test pits TP-4, TP-5 and TP-6 were excavated. The purpose of these test pits was to provide additional confirmation that the affected soils could be adequately excavated prior to further excavation. TP-4 was excavated approximately 1.5 feet below the bottom of the excavation from August 25 (approximately 3.5 feet below basement floor slab grade). TP-5 was excavated below the basement floor slab of the building to the east to a depth of approximately 2 feet below the slab. TP-6 was excavated outside the building to the east to a depth of approximately 12 feet below ground surface. Logs for these test pits were not prepared.

6) Samples from the bottom of each of the test pits were submitted for same-day laboratory analysis. The concentrations of tetrachloroethylene were below the laboratory detection limit for all three samples. Following the receipt of the laboratory analysis, the excavation of affected soils was started. Soils were excavated an additional 1.5 feet in the area of the August 25 excavation. The excavation then extended laterally at the same depth to a lateral extent defined by the previously excavated test pits (TP-1, TP-2, TP-3, TP-5 and TP-6).

Field Screening Summary

The PID field screening summary for soil samples S-1 through S-17 is included with this letter. PID readings for samples collected from test pits TP-1, TP-2, and TP-3 are indicated on the attached test pit logs. PID screening was not performed on soil samples from TP-4 through TP-6.

Sample Depths

The sample depths for S-1 through S-17 are indicated on the attached PID summary sheet. Please not that for samples obtained under the basement floor slab, the depth is referenced to the floor slab grade. Test pits and/or samples obtained outside the basement area are referenced to surface grade. Basement floor slab grade is approximately 7 to 8 feet below surface grade.

We trust the information provided in this letter answered your questions regarding this project. Please contact us at 359-3030 if you have any questions.

Respectfully,

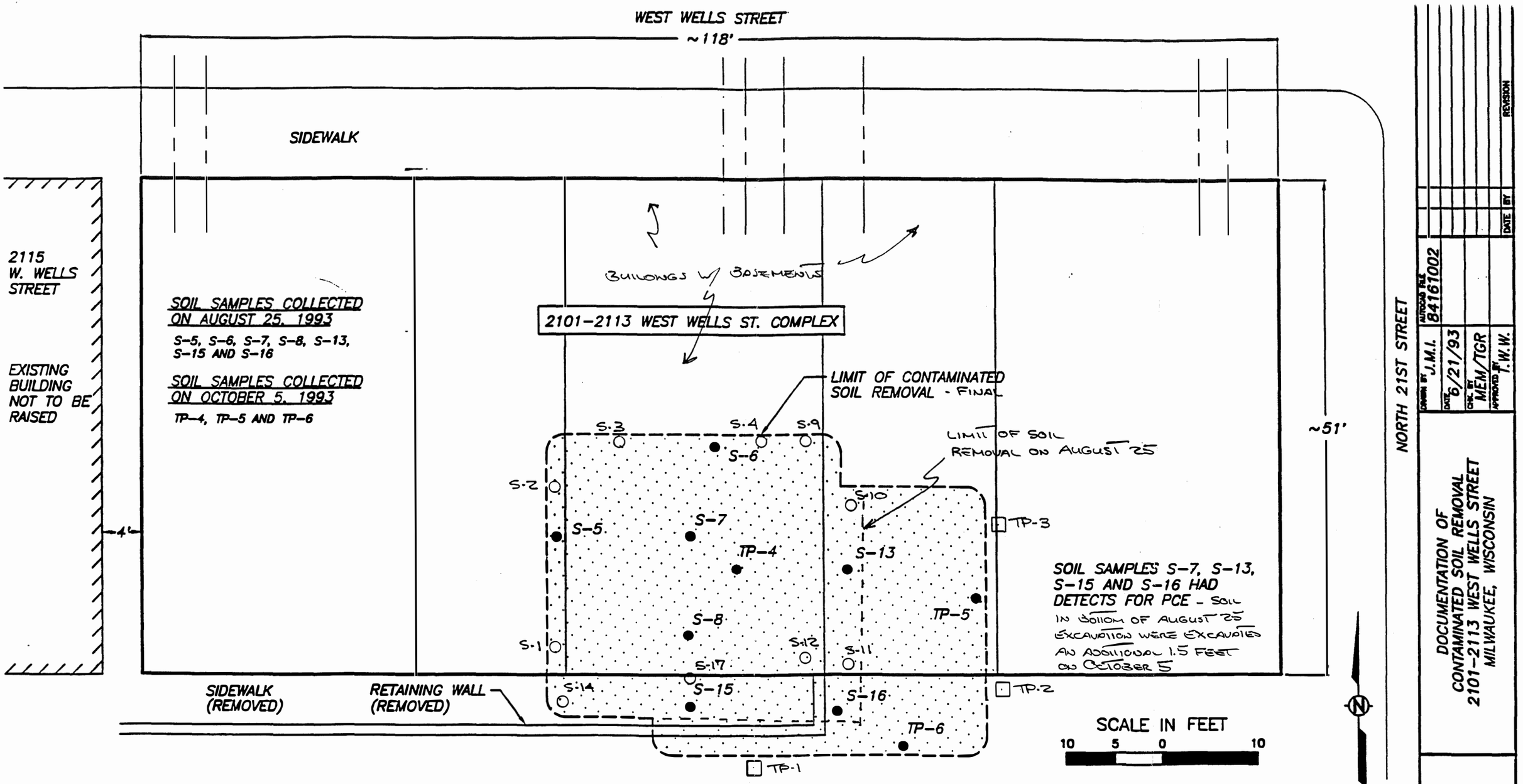
STS CONSULTANTS, LTD.

Thomas W. Kroeger
Associate

Thomas W. Wolf, P.E.
Executive Vice President

84161XF/2111 Wells Memo/TWK-kw

cc: Jon S. Herreman - O'Neil, Cannon and Hollman



DOCUMENTATION OF CONTAMINATED SOIL REMOVAL
2101-2113 WEST WELLS STREET
MILWAUKEE, WISCONSIN

DRAWN BY	AUTOCAD FILE
J.M.I.	84161002
DATE	
6/21/93	
CHK. BY	
MEM/TGR	
APPROVED BY	
T.W.W.	

REVISION	DATE	BY

SEC Consultants, Ltd.
Consulting Engineers

SEC PROJECT NUMBER 84161XF

SCALE 1"=10'

FIGURE NUMBER 1

STS Consultants, Ltd.

HNU READINGS

PROJECT NUMBER: 94161XF
DATE: 8-25-93
SAMPLED BY: DCM
PROJECT ENGINEER: JGR

SAMPLE NUMBER	DEPTH BELOW GROUND SURFACE	LOCATION	SOIL DESCRIPTION	HNU READING (PID UNITS)
S-1	1' **	WEST WALL	GREY SILTY CLAY	<1
S-2	1' **	WEST WALL	BROWN SILTY CLAY	<1
S-3	1' **	NORTH WALL	GREY SILTY CLAY	<1
S-4	1' **	"	"	<1
S-5*	1' **	WEST WALL	"	<1
S-6*	1' **	NORTH WALL	"	<1
S-7*	2' **	BOTTOM	"	3
S-8*	2' **	BOTTOM	"	<1
S-9	1' **	NORTHEAST CORNER	BROWN SILTY CLAY	<1
S-10	4' **	EAST WALL	"	3
S-11	1' **	"	GREY SILTY CLAY	<1
S-12	3' **	BOTTOM	"	<1
S-13*	3' **	EAST WALL	BROWN SILTY CLAY	<1
S-14	6'	S WALL	"	<1
S-15*	8'	"	"	<1
S-16*	7'	"	"	2
S-17	10'	BOTTOM	GREY SILTY CLAY	<1
* SAMPLE LABORATORY ANALYZED				
** DEPTH BELOW	BASEMENT FLOOR GRADE, WHICH WAS			
	APPROXIMATELY 7'-8' BELOW SURFACE GRADE.			

STS Construction Services Group
Test Pit Field Record

TEST PIT NO. 1

Project 21st & Wells STS Project No. 84161XF

Location Milwaukee Date 9/2/93

Weather Cloudy rain

Time Started 9:55 Time Completed 9:17 Ground Elevation

EXCAVATION EQUIPMENT

contractor Ganos make Akerman

operator model

capacity 1.0 c.y. reach 15' ft.

DEPTH	QP	DCP	SAMPLE NO	Soil Description	water cont.	excav. effort	boulder count Qty. Cl.	PID
0								
1'				(Fill) Br Si cl tr gr- moist				
2'								
3'				Br Si cl tr gr- moist				
4'				gray Silt laying?				
5'								
6'			(1)					<1
7'								
8'			(2)					<1
9'								
10'			(3)	Grey Si cl tr gr- moist				<1
11'								
12'			(4)	Grey Si Cl tr gr-				<1
13'				End of TP-1				
14'								

TP Dry After Excavation

REMARKS:

QP = Calibrated Penetronometer (tons/ft²)

PROPORTIONS USED

trace(tr.)	0-10%
little(lt.)	10-20%
some(so.)	20-35%
and	35-50%

ABBREV.

F—Fine
M—Medium
C—Course
V—Very
Gr.—Gray
Bn.—Brown
Yel.—Yellow

EXCAVATION EFFORT

E—Easy
M—Moderate
D—Difficult

GROUNDWATER

Elapsed time to reading (hrs.) G.W.L.

STS Construction Services Group
Test Pit Field Record

TEST PIT NO. 2

Project 21ST & Wells STS Project No. 2416XF

Location Milwaukee Date 9/2/93

Weather Cloudy

Time Started 9:30 A contractor Ganos make Akerman

Time Completed 10:00 AM operator ____ model ____

Ground Elevation ____ capacity 1.0 c.y. reach 15' ft.

EXCAVATION EQUIPMENT

DEPTH	QP	DCP	SAMPLE NO.	Soil Description	water cont.	excav. effort	boulder count Qty. Cl.	PID
0								
1'				Br SA Sgr (fill)				
2'								
3'				Br si cl (fill)				
4'								
5'								
6'			1	Grey si cl / cl si sgr				<1
7'								
8'			2	Grey si cl				<1
9'								
10'								
11'			3	Grey si cl				<1
12'			4	Grey si cl				<1
13'				End of TP-4				
14'								

TP-2 Dry

REMARKS: Dimensions 6 x 14 x 12.5

QP = Calibrated Penetronometer (tons/ft²)

PROPORTIONS USED

trace(tr.)	0-10%
little(lt.)	10-20%
some(so.)	20-35%
and	35-50%

ABBREV.

F—Fine
M—Medium
C—Course
V—Very
Gr.—Gray
Bn.—Brown
Yel.—Yellow

EXCAVATION EFFORT

E—Easy
M—Moderate
D—Difficult

GROUNDWATER

Elapsed time to reading ____ (hrs.) G.W.L.

STS Construction Services Group
Test Pit Field Record

TEST PIT NO. 3

Project 21st & wells **STS Project No.** 8416XF

Location Milwaukee **Date** 9/2/93

Weather Cloudy

Time Started 10:30

Time Completed 11:00

Ground Elevation

EXCAVATION EQUIPMENT

contractor Ganos **make** Akerman

operator **model**

capacity 1.0 **c.y.** **reach** 15' **ft.**

DEPTH	QP	DCP	SAMPLE NO.	Soil Description	water cont.	excav. effort	boulder count Qty. Cl.	PID
0				Br SAS gr - large tree roots (fill)				
1'								
2'				Br Si Cl w SAS gr - (fill)				
3'								
4'								
5'								
6'			1					<1
7'				Red Si Cl & sr - very stiff to Hard				
8'			2					<1
9'								
10'			3	Grey Si Cl				
11'								<1
12'			4					<1
13'				End of Test pit				
14'								

REMARKS:

QP = Calibrated Penetronometer (tons/ft²)

333-3010
Brian Ganos (Mobil)

PROPORTIONS USED

trace(tr.)	0-10%
little(lt.)	10-20%
some(so.)	20-35%
and	35-50%

ABBREV.

F—Fine
M—Medium
C—Course
V—Very
Gr.—Gray
Bn.—Brown
Yel.—Yellow

EXCAVATION EFFORT

E—Easy
M—Moderate
D—Difficult

GROUNDWATER

Elapsed time to reading (hrs.) G.W.L.

PRECISION ANALYTICAL LABORATORY

205 WEST GALENA
MILWAUKEE, WI 53212
(414) 272-5222

09/08/93

Analytical Report

Attn: Tom Kroeger
Client: STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

WORK ID: 84161XF

Date Received: 09/02/93
Date Reported: 09/08/93

PAL ORDER #: 9309052

SAMPLE DESCRIPTION	LAB ID	DATE COLLECTED
TP-1 S-3	01A	09/02/93
TP-2 S-3	02A	09/02/93
TP-3 S-3	03A	09/02/93
EXCAVATION WATER	04A	09/02/93

Laboratory ID Number (Wisconsin DNR): 241369260

Certified By
Jeff Bushner

PRECISION ANALYTICAL LABORATORY

CLIENT: **STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW846)
Sample ID: TP-1 S-3			Lab ID:	9309052-01A		Collected: 09/02/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.1	ug/kg	09/03/93		JAH	
1,1,1-Trichloroethane	BQL	1.1	ug/kg	09/03/93		JAH	
Dry Weight	88	1	%	09/03/93		APW	
GC/MS Confirm for VOA/GC	NO	-		09/03/93		JAH	Mass Conf.
Single Compound	-	-		09/03/93		JAH	
Sample ID: TP-2 S-3			Lab ID:	9309052-02A		Collected: 09/02/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.1	ug/kg	09/03/93		JAH	
1,1,1-Trichloroethane	BQL	1.1	ug/kg	09/03/93		JAH	
Dry Weight	88	1	%	09/03/93		APW	
GC/MS Confirm for VOA/GC	NO	-		09/03/93		JAH	Mass Conf.
Single Compound	-	-		09/03/93		JAH	
Sample ID: TP-3 S-3			Lab ID:	9309052-03A		Collected: 09/02/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.1	ug/kg	09/03/93		JAH	
1,1,1-Trichloroethane	BQL	1.1	ug/kg	09/03/93		JAH	
Dry Weight	86	1	%	09/03/93		APW	
GC/MS Confirm for VOA/GC	NO	-		09/03/93		JAH	Mass Conf.
Single Compound	-	-		09/03/93		JAH	
Sample ID: EXCAVATION WATER			Lab ID:	9309052-04A		Collected: 09/02/93	
8021 - Water							8021
Tetrachloroethene	45	1.0	ug/l	09/02/93		JAH	
1,1,1-Trichloroethane	BQL	1.0	ug/l	09/02/93		JAH	
GC/MS Confirm for VOA/GC	YES			09/07/93		LJS	Mass Conf.
Single Compound	-	-		09/02/93		JAH	

BQL - Below Quantification Limit NP - Not Present

PRECISION ANALYTICAL LABORATORY

Report Comments

09/08/93

CLIENT: STS Consultants

PAL Order #: 9309052

All analysis as per approved method found in one or more of the following:
Standard Methods for Evaluation of Water and Wastewater, 17th Edition
Methods for Chemical Analysis for Water and Wastes, Revised March 1983, EPA 600/4-79-020
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition 1986 EPA SW846

Analysis performed or certified by Precision Analytical Laboratory

The organic data is reported out on a dry-weight basis.

Sample was covered air tight in approved container, shipped in cooler from the source to our lab, temperature upon arrival was 4 degrees C.

STS CHAIN OF CUSTODY RECORD

№ 18089 RECORD NO. 1 THROUGH 1

Contact Person Tom Kruger
Phone No. 259 3030
Project No. [illegible] PO No.
STS Office [illegible]

SPECIAL HANDLING REQUEST
☐ RUSH
☐ VERBAL
☐ OTHER

Laboratory PNL
Contact Person Beth Klein
Phone No.
Results Due 48 hr turn around

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data: PID/FID Ambient	Field Data: PID/FID Sample	Field Data: PH	Field Data: Spec. Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
TP-1 S-3	9/2	9:11	X		1	Soil							111-Trichloroethene + Tetrachloroeth.	
TP-1 S-4		9:12	X		1	Soil		X					"	" (Hold)
TP-2 S-3	9/2	9:52	X		1	Soil							"	"
TP-2 S-4	9/2	10:00	X		1	Soil							"	" (Hold)
TP-3 S-3	9/2	10:45			1	Soil							"	"
TP-3 S-4	9/2	11:00			1	Soil							"	" (Hold)
Equipment Wash	9/2	1:00pm			3	Water							111-trichloroethene + Tetrachloroeth.	

Collected by: David Markle	Date 9/2/93	Time 4pm	Delivery by: Dave Markle	Date 9/2/93	Time pm
Received by:	Date	Time	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received for lab by:	Date	Time	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt ☐ Yes ☐ No ☐ N/A

Final disposition:

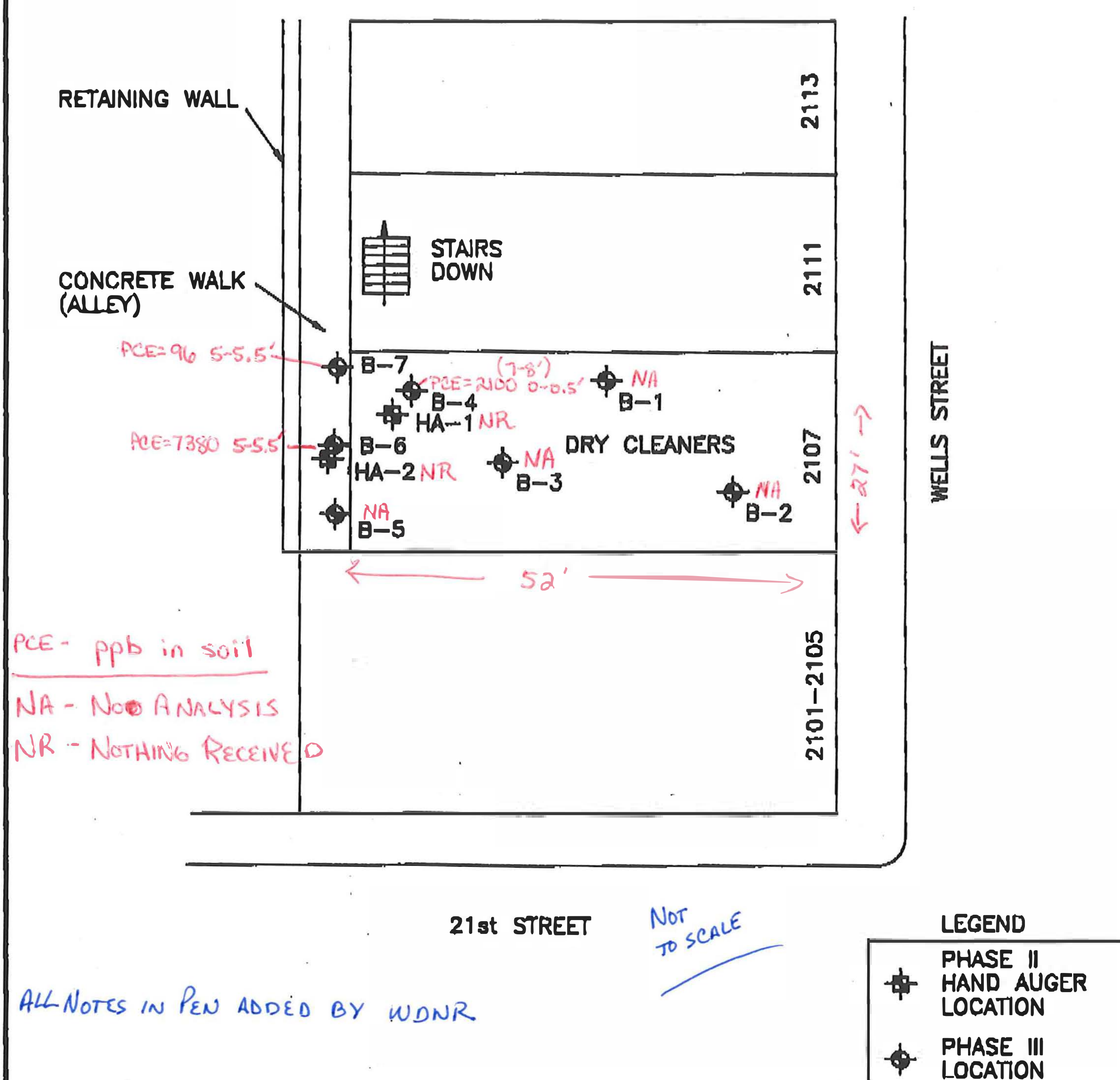
Comments (Weather Conditions, Precautions, Hazards):
Hold Samples - Analyse only if other samples above lab detection limits. Notify STS (Tom Ryan) before proceeding.

Distribution: Original and Green – Laboratory Yellow – As needed Pink – Transporter Goldenrod – STS Project File
Instruction to Laboratory: Forward completed original to STS with analytical results. Retain green copy.

11/90 FORM 038

Post-it™ Fax Note 7671

Date 6-20	# of pages ▶ 8
To Pam Mylotta	From Tom Kroeger
Co./Dept. WDNR	Co.
Phone #	Phone #
Fax # 961-2770	Fax #



STS Consultants, Ltd.

PROJECT/CLIENT

PHASE III ENVIRONMENTAL ASSESSMENT
BORING LOCATION DIAGRAM
2111 WEST WELLS
MILWAUKEE, WISCONSIN

DRAWN BY	J.M.I.	5/15/92
CHECKED BY	K.L.B.	5/15/92
APPROVED BY	K.R.H.	5/15/92
SCALE N.T.S.	FIGURE NO. 3	
CADFILE 83931G-3.DWG	STS PROJECT NO. 83931XG	
PLOT DATE		

STS Consultants, Ltd.

HNU READINGS

COPY

PROJECT NUMBER: 35931 XH
DATE: 2.23.92
SAMPLED BY: GLB
PROJECT ENGINEER: K. BREHM

SAMPLE NUMBER	DEPTH BELOW GROUND SURFACE	LOCATION	SOIL DESCRIPTION	HNU READING (PID UNITS) 0-10 2CAL
B1 / S1	0.0' - 0.5'	SEE DIAGRAM	BR SI SA CL TR GR	0.1
/ S2	1.0' - 1.25'		BR SA CL SI	0.4
/ S3	2.0' - 2.25'		" "	0.0
/ S4	3.0' - 3.25'		BR SA CL SI SM GRV	0.0
/ S5	3.75' - 4.0		GR SI CL TR SA	0.0
B2 / S1	0.0' - 0.5'		FOUNDRY SAND	0.9
/ S2	1.0' - 1.25'		GR SI CL TR SA	0.1
/ S3	2.0' - 2.25'		" "	0.1
/ S4	3.0' - 3.25'		" "	0.1
/ S5	3.75' - 4.0'		" "	0.1
B3 / S1	0.0' - 0.5'		BR SI SA CL	1.0
/ S2	1.0' - 1.25'		" "	5.0
/ S3	2.0' - 2.25'		BR VR SI SA CL	1.0
/ S4	3.0' - 3.25'		TR SI SA CL	0.0
/ S5	3.75' - 4.0'		" "	0.0
B4 / S1	0.0' - 0.5'	*	FOUNDRY SAND	17.0
/ S2	1.0' - 1.25'		TR SI SA CL	0.4
/ S3	2.0' - 2.25'		" "	0.1
/ S4	3.0' - 3.25'		" "	0.0
/ S5	3.75' - 4.0'	SEE DIAGRAM	" "	0.0

IN PROGRESS

STS Consultants, Ltd.

HNU READINGS

COPY

PROJECT NUMBER: B393IXH
DATE: 3/4/92
SAMPLED BY: CARTER BOHN
PROJECT ENGINEER: KEVIN PRECHM

SAMPLE NUMBER	DEPTH BELOW GROUND SURFACE	LOCATION	SOIL DESCRIPTION	HNU READING (PID UNITS)
B7/S1	0 - 0.25'		BROWN CL.	1
S2	2.5 - 3.0		↓	<1
S3	5 - 5.5	*	↓	1
S4	7.5 - 8.0		↓	<1
S5	10 - 10.5		GR. CLAY	<1
S6	12 - 12.5'		↓	<1
				<1
B5/S1				<1
S2				<1
B6/S1	0 - 0.5		BROWN CL	2
S2	2.5 - 3.0		↓	25
S3	5 - 5.5	*	↓	45
S4	7.5 - 8.0		↓	25
S5	10 - 10.5		GRAY CLAY	7
S6	12 - 12.5	*	↓	<1
S7	15 - 15.25		↓	<1

IN PROGRESS

ANALYTICAL REPORT

ESCAN

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

Attn: Kevin Brehm

CUST NUMBER: 83931XH
SAMPLED BY: Client
DATE REC'D: 03/06/92
REPORT DATE: 03/20/92
APPROVED BY: JCH

COPY

	Units	Detection Limit	B-6 #6 PID 21
Benzene	ng/g	1.7	X
Bromoform	ng/g	6.9	X
Bromomethane	ng/g	14.0	X
Carbon Tetrachloride	ng/g	1.7	X
Chlorobenzene	ng/g	6.9	X
Chloroethane	ng/g	6.9	X
2-Chloroethylvinyl Ether	ng/g	17.0	X
Chloroform	ng/g	1.7	X
Chloromethane	ng/g	6.9	X
Chlorodibromomethane	ng/g	1.7	X
1,2-Dichlorobenzene	ng/g	3.4	X
1,3-Dichlorobenzene	ng/g	3.4	X
1,4-Dichlorobenzene	ng/g	1.7	X
Bromodichloromethane	ng/g	1.7	X
1,1-Dichloroethane	ng/g	1.7	X
1,2-Dichloroethane	ng/g	1.7	X
1,1-Dichloroethylene	ng/g	3.4	X
1,2-Dichloroethylene	ng/g	3.4	4.4
Methylene Chloride	ng/g	8.6	X
1,2-Dichloropropane	ng/g	1.7	X
cis-1,3-Dichloropropene	ng/g	6.9	X
trans-1,3-Dichloropropene	ng/g	1.7	X
Ethylbenzene	ng/g	3.4	X
1,1,2,2-Tetrachloroethane	ng/g	3.4	X
Tetrachloroethylene	ng/g	1.7	8.6
Toluene	ng/g	1.7	3.7
1,1,1-Trichloroethane	ng/g	1.7	X
1,1,2-Trichloroethane	ng/g	1.7	X
Trichloroethylene	ng/g	1.7	2.2
Vinyl Chloride	ng/g	6.9	X
Trichlorofluoromethane	ng/g	3.4	X
Dichlorodifluoromethane	ng/g	6.9	X
m-Xylene	ng/g	3.4	X
o & p-Xylene	ng/g	3.4	X
Analytical No.:			63956

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

ANALYTICAL REPORT

ENVIROSCAN

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

CUST NUMBER: 63931XH
SAMPLED BY: Client
DATE REC'D: 03/06/94
REPORT DATE: 03/20/94
APPROVED BY: JCH

COPY

Attn: Kevin Brehm

	Units	Detection Limit	B-7,#3 PID 41	B-6 #3 PID = 45 #5
Benzene	ng/g	2.0	X	X
Bromoform	ng/g	8.0	X	X
Bromomethane	ng/g	16.0	X	X
Carbon Tetrachloride	ng/g	2.0	X	X
Chlorobenzene	ng/g	8.0	X	X
Chloroethane	ng/g	8.0	X	X
2-Chloroethylvinyl Ether	ng/g	20.0	X	X
Chloroform	ng/g	2.0	X	X
Chloromethane	ng/g	8.0	X	X
Chlorodibromomethane	ng/g	2.0	X	X
1,2-Dichlorobenzene	ng/g	4.1	X	X
1,3-Dichlorobenzene	ng/g	4.1	X	X
1,4-Dichlorobenzene	ng/g	2.0	X	X
Bromodichloromethane	ng/g	2.0	X	X
1,1-Dichloroethane	ng/g	2.0	X	X
1,2-Dichloroethane	ng/g	2.0	X	X
1,1-Dichloroethylene	ng/g	4.1	X	X
1,2-Dichloroethylene	ng/g	4.1	X	57.5
Methylene Chloride	ng/g	10.0	X	X
1,2-Dichloropropane	ng/g	2.0	X	X
cis-1,3-Dichloropropene	ng/g	8.0	X	X
trans-1,3-Dichloropropene	ng/g	2.0	X	X
Ethylbenzene	ng/g	4.1	X	X
1,1,2,2-Tetrachloroethane	ng/g	4.1	X	X
Tetrachloroethylene	ng/g	4.1	96.8	7,380.
Toluene	ng/g	2.0	X	2.9
1,1,1-Trichloroethane	ng/g	2.0	X	X
1,1,2-Trichloroethane	ng/g	2.0	X	X
Trichloroethylene	ng/g	2.0	X	675.
Vinyl Chloride	ng/g	8.0	X	X
Trichlorofluoromethane	ng/g	4.1	X	4.1
Dichlorodifluoromethane	ng/g	8.0	X	X
m-Xylene	ng/g	4.1	X	6.1
o & p-Xylene	ng/g	4.1	X	X
Analytical No.:			63954	63955

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

ANALYTICAL REPORT

ENVIROSCAN

COPY

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

CUST NUMBER: 83931XH
SAMPLED BY: Client
DATE REC'D: 03/06/92
REPORT DATE: 03/20/92
APPROVED BY: JCH

Attn: Kevin Brehm

Customer Number	Total Solids	Analytical Number
B-7,#3	88.6	63954
B-6 #3	88.6	63955
B-6 #6	88.8	63956
Detection Limit	-	
Units	%	

Results calculated on a dry weight basis.

SWANSON ENVIRONMENTAL

3150 North Brookfield Road
Brookfield, Wisconsin 53045
telephone (414) 783-6111
FAX (414) 783-5752

WDNR Certification #268181760

ANALYTICAL REPORT

REPORT NUMBER: B8464

STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

Attn: Mr. Kevin Brehm
Project #83931XH

DATE: March 5, 1992
PURCHASE ORDER:
SEI NO: WL0290
DATE COLLECTED: 02/27/92
DATE RECEIVED: 02/28/92

Matrix: Soil

Units: mg/kg (ppm)

COPY

	SEI ID	0290-1
VOLATILES	Sample ID	B-4/S1
EPA Method 8021		
Methylene chloride		0.11
1,1,2,2-Tetrachloroethane		<0.05
Tetrachloroethene		2.1
Toluene		0.07
1,1,1-Trichloroethane		<0.05
1,1,2-Trichloroethane		<0.05
Trichloroethene		0.20
Trichlorofluoromethane		<0.05
Vinyl chloride		<0.05
Xylenes		0.06

Rosemary L. Dineen
Laboratory Director

ORIGINAL

SWANSON ENVIRONMENTAL IF

3150 North Brookfield Road
Brookfield, Wisconsin 53045
telephone (414) 783-6111
FAX (414) 783-5752

WDNR Certification #268181760

ANALYTICAL REPORT

REPORT NUMBER: B8464

STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

Attn: Mr. Kevin Brehm
Project #83931XH

DATE: March 5, 1992
PURCHASE ORDER:
SEI NO: WL0290
DATE COLLECTED: 02/27/92
DATE RECEIVED: 02/28/92

Matrix: Soil

Units: mg/kg (ppm)

	SEI ID	0290-1
VOLATILES	Sample ID	B-4/S1
EPA Method 8021		
Benzene		<0.05
Bromodichloromethane		<0.05
Bromoform		<0.05
Bromomethane		<0.05
Carbon tetrachloride		<0.05
Chlorobenzene		<0.05
Chloroethane		<0.05
2-Chloroethylvinyl ether		<0.05
Chloroform		<0.05
Chloromethane		<0.05
Dibromochloromethane		<0.05
1,2-Dichlorobenzene		<0.05
1,3-Dichlorobenzene		<0.05
1,4-Dichlorobenzene		<0.05
Dichlorodifluoromethane		<0.05
1,1-Dichloroethane		<0.05
1,2-Dichloroethane		<0.05
1,1-Dichloroethene		<0.05
trans-1,2-Dichloroethene		<0.05
1,2-Dichloropropane		<0.05
cis-1,3-Dichloropropene		<0.05
trans-1,3-Dichloropropene		<0.05
Ethylbenzene		<0.05

SWANSON ENVIRONMENTAL IF

3150 North Brookfield Road
Brookfield, Wisconsin 53045
telephone (414) 783-6111
FAX (414) 783-5752

WDNR Certification #268181760

ANALYTICAL REPORT

REPORT NUMBER: B8464

STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

Attn: Mr. Kevin Brehm
Project #83931XH

DATE: March 5, 1992
PURCHASE ORDER:
SEI NO: WL0290
DATE COLLECTED: 02/27/92
DATE RECEIVED: 02/28/92

Matrix: Soil

Units: mg/kg (ppm)

COPY

	SEI ID	0290-1
VOLATILES	Sample ID	B-4/S1
EPA Method 8021		
Benzene		<0.05
Bromodichloromethane		<0.05
Bromoform		<0.05
Bromomethane		<0.05
Carbon tetrachloride		<0.05
Chlorobenzene		<0.05
Chloroethane		<0.05
2-Chloroethylvinyl ether		<0.05
Chloroform		<0.05
Chloromethane		<0.05
Dibromochloromethane		<0.05
1,2-Dichlorobenzene		<0.05
1,3-Dichlorobenzene		<0.05
1,4-Dichlorobenzene		<0.05
Dichlorodifluoromethane		<0.05
1,1-Dichloroethane		<0.05
1,2-Dichloroethane		<0.05
1,1-Dichloroethene		<0.05
trans-1,2-Dichloroethene		<0.05
1,2-Dichloropropane		<0.05
cis-1,3-Dichloropropene		<0.05
trans-1,3-Dichloropropene		<0.05
Ethylbenzene		<0.05

241169940
ERR/ERP

May 10, 1994

Mr. Jon S. Herreman
Attorney At Law
O'Neil, Cannon & Hollman, S.C.
Suite 1400
Bank One Plaza
111 E. Wisconsin Ave.
Milwaukee, WI 53202-4803

RE: 2101-13 West Wells Street, Milwaukee, Wisconsin -- STS Project No. 84161XF

Dear Mr. Herreman:

On Wednesday, May 4, 1994, STS Consultants, Ltd. (STS) contacted Ms. Pam Mylotta of the Southeast District Office of the Wisconsin Department of Natural Resources (WDNR) to inquire about the review status of the Construction Documentation Report prepared by STS for the contaminated soil removal for the above referenced property. A "No Further Action" letter for this site was requested from the WDNR based on their review of the Construction Documentation Report. Ms. Mylotta indicated that her review of this report is scheduled for June, 1994. She indicated that she was fairly confident that she would be able to complete the review of the report in June, barring unforeseen high priority projects which may be assigned to her. Ms. Mylotta also stated that she may be able to review the report later in May if the time required for review of the projects scheduled for May is less than anticipated.

We plan to contact Ms. Mylotta in late May to determine the status of the review of this project at that time. Please call our office if there are any questions concerning this issue.

Very truly yours,

STS CONSULTANTS, LTD.

Thomas G. Ryan, P.E.
Senior Project Engineer

Thomas W. Wolf, P.E. TGR
Executive Vice President

LTR/Milw/2101-13 W Wells/84161/TGR-dc

cc: Mr. Jeff Brown, Grunau Project Development
Ms. Pam Mylotta, WDNR

STS Consultants Ltd.
Consulting Engineers

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

FID 241 169940
ERR/ERP
MILW CO.

STS Letter of Transmittal

To: Pam Mylotta
Wisconsin Dept of Natural Resources
4041 N. Richards Street
Milwaukee, WI 53212

Date: 4-18-94 STS Project No. 84146XF

Project: Soil Remediation Documentation

Location: 2101-13 West Wells Street
Milwaukee, WI

From: STS Consultants, Ltd.

☒ 11425 West Lake Park Drive, Milwaukee, WI, 414-359-3030, 414-359-0822(FAX)
☐ 111 Pfingsten Road, Northbrook, IL 60062, 708-272-6520, 708-498-2721(FAX)
☐ 1035 Kepler Drive, Green Bay, WI, 414-468-1978, 414-468-3312(FAX)
☐ 3340 Ranger Road, Lansing, MI 48906, 517-321-4964, 517-321-2132(FAX)
☐ 3650 Annapolis Lane, Minneapolis, MN 55447, 612-559-1900, 612-559-4507(FAX)
☐ 207 East Holly Avenue, Suite 208, Sterling, VA 22170, 703-406-0126, 703-406-0059(FAX)

We are Sending the Following Item(s):

☒ Attached ☐ Via Fax ☐ Under Separate Cover

☐ Prints ☐ Copy of Letter ☐ Proposal/Report
☐ Shop Drawings ☐ Test Results ☐ Samples
☐ Specifications ☐ Boring Logs ☐ Change Order
☐ Other

They are Transmitted as Indicated:

☒ For Approval ☐ As Requested
☐ For Your Use ☐ For Review and Comment

Remarks:

Pam,

Enclosed please find one copy of the October 29th, 1993 STS report entitled "Construction Documentation Report, Demolition and Soil Remediation, 2101-13 West Wells Street, Milwaukee, Wisconsin." Appendix A of this reoprt contains pertinant correspondence regarding the regulatory status of the excavated soils, On behalf of the owner, we request the Department issue a closure letter for this site by May 27, 1994.

Please call the office if there are any questions regarding this report.

cc: Mr. Jeff Brown
Mr. Jon Herreman

Tom Ryan

STS Representative
Tom G. Ryan

FID# 241169940
ERR/ERP

December 21, 1993

Mr. Jon S. Herreman
Attorney At Law
O'Neil, Cannon & Hollman, S.C.
Suite 1400
Bank One Plaza
111 E. Wisconsin Ave.
Milwaukee, WI 53202-4803

RE: 2101-13 W. Wells Street, Milwaukee, Wisconsin -- STS Project No. 84161XF

Dear Mr. Herreman:

We are in receipt of your December 3, 1993 letter regarding the Wisconsin Department of Natural Resources (WDNR) review of the STS Consultants, Ltd. Construction Documentation Report for the above referenced property. I have contacted Pam Mylotta, Environmental Repair Hydrogeologist for the Southeast District Office, and discussed the issuance of a closure letter for this project. Ms. Mylotta stated that the Wells Street project is a low priority site for the WDNR and that construction documentation reports for low priority sites are reviewed by the Department only if time and workload permits. Based on our request for the issuance of a closure letter for this site, Ms. Mylotta will enter this project on the list of sites to be reviewed by WDNR for final closure. She indicated that it may take several months or perhaps longer for the review of this project to be completed and the closure letter to be issued.

I will contact Ms. Mylotta again in the first quarter of 1994 to determine if the closure review has been initiated by WDNR. If you have any questions regarding this matter, please call our office.

Very truly yours,

STS CONSULTANTS, LTD.

Thomas G. Ryan, P.E.
Senior Project Engineer

TGR/dc-m11/84161XF 2101-13 W Wells

√cc: Pam Mylotta, WDNR

STS Consultants Ltd.
Consulting Engineers

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

FID 241169140
ERR/ERP
MILW CO.

WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District - Annex
Post Office Box 12436
4041 N. Richards Street
Milwaukee, Wisconsin 53212
TELEPHONE: 414-961-2727
TELEFAX #: 414-961-2770

June 24, 1993

In Response Refer To: EPA ID #WID
FID
County of Milw.
HW/NOTIF

Thomas G. Ryan, P.E.
Project Manager
STS Consultants Ltd.
11425 West Lake Park Drive
Milwaukee, WI 53224

Kathryn R. Huibregtse, P.E.
Principal Engineer
STS Consultants Ltd.
11425 West Lake Park Drive
Milwaukee, WI 53224

Dear Mr. Ryan and Ms. Huibregtse:

RE: Solvent Impacted Soils at 2111 West Wells Street, Milwaukee, Wisconsin -- STS Project No. 84161XF

The purpose of this letter is to respond to your June 10, 1993 letter regarding classification of solvent impacted soils located at 2111 West Wells Street in the City of Milwaukee. Your letter states that TCLP test results for a soil sample collected from a soil boring at this site were 0.42 mg/l for tetrachloroethylene and 0.32 mg/l for trichloroethylene. These levels are below the regulatory levels of 0.7 mg/l for tetrachloroethylene and 0.5 mg/l for trichloroethylene in Table I of s. NR 605.08, Wis. Adm. Code. Your letter also says that the specific source of the solvents in the soil is unknown. It indicates that one likely source could be spillage or leakage of solvents when a dry cleaning operation, which closed in 1983, occupied the building.

As you know it is the generator's responsibility to determine if a solid waste is a hazardous waste as required by s. NR 605.01, Wis. Adm. Code. A part of this determination involves reviewing the history of industrial operations at the site. For example, the owner/operator of the dry cleaning operation and former employees could be interviewed to determine if releases of solvents caused the soil contamination. In addition, you should review the Departments of Natural Resources' files to determine if there is information on the dry cleaning operation. These steps are necessary to determine if the waste is listed as a hazardous waste. In order for the Department to concur with your determination that excavated soils from the 2111 West Wells Street site are not hazardous, we need an understanding of the process used, to make a listed hazardous waste determination.

If you have questions on this letter, please contact me at 414-961-2713.

FID 241169940
ERR/ERP
MILW CO.

June 10, 1993

Ms. Pam Mylotta
Environmental Repair Project Manager
Wisconsin Department of Natural Resources
Southeast District Office
Richards Street Annex
4041 North Richards Street
Milwaukee, WI 53212

RE: Solvent Impacted Soils at 2111 West Wells Street, Milwaukee, Wisconsin -- STS Project No. 84161XF

Dear Pam:

This letter has been prepared to confirm our recent phone conversation regarding the solvent impacted soils located at 2111 West Wells Street in the City of Milwaukee, Wisconsin. The subject property owned by Ms. Ann Thoma containing the solvent impacted soils is currently undergoing demolition. As part of the demolition activities, we anticipate that soils impacted with the solvents tetrachloroethylene and trichloroethylene will be excavated and transported to and disposed of at a sanitary landfill site.

The identification of the tetrachloroethylene and trichloroethylene impacted soils was as a result of a soil boring investigation conducted by STS Consultants, Ltd. (STS) on the subject property. Soil PID readings and laboratory analyses performed on soil samples during the soil boring investigation indicated the presence of tetrachloroethylene and trichloroethylene in the site soils. STS drilled an additional boring in the area on the site exhibiting the highest field and laboratory test results for these two parameters based on the findings from the initial investigations. The soil sample collected from this boring was submitted to Precision Analytical Laboratories, Inc. in Milwaukee for Protocol A Analysis required by Waste Management of Wisconsin, Inc. for acceptance of impacted soils at their landfill sites. The results of this laboratory testing are enclosed with this letter.

The specific source of the solvents in the soil is unknown. One likely source could be spillage or leakage of solvents when a dry cleaning operation occupied the building. The dry cleaning operation culminated in 1983. There is also no evidence that the released solvents were mishandled wastes or off-specification materials which would result in a designation as a listed hazardous waste.

Therefore, the characteristic hazardous waste criteria should be considered when evaluating these soils and the available disposal options. The results of the Toxicity Characteristic Leaching Procedure (TCLP) test on the soil sample collected at the location of the highest PID readings is as follows:

STS Consultants Ltd.
Consulting Engineers

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

Parameter	TCLP TestResult mg/l	Regulatory Level mg/l
Tetrachloroethylene	0.42	0.7
Trichloroethylene	0.32	0.5

These results indicate that even soils in the most highly impacted area are not classified as characteristically hazardous and could be managed as a solid waste.

The estimated quantity of impacted soils at this site is 150 cubic yards. The impacted soils are present beneath a portion of the basement floor which will be removed to expose the soils for excavation and adjacent to the south foundation basement wall.

Based on this analysis, it appears to STS that the solvent impacted soils should not be classified as a hazardous waste under current state and federal regulations. We request that your office review this information and issue a letter to STS providing your concurrence with this assessment. The demolition activities for the basement area of the building including the excavation of the solvent impacted soils is scheduled to take place in July of this year. As such, we respectfully request your review of this letter as soon as possible to allow the securing of the necessary landfill disposal permits.

If there are any questions concerning this letter or if more information is needed, please call our office as soon as possible. Thank you in advance for your efforts to review this information.

Very truly yours,

STS CONSULTANTS, LTD.

Thomas G. Ryan, P.E.
Project Manager

Kathryn R. Huibregtse, P.E. TGR
Principal Engineer

TGR/ed-m11/84161XF/WDNR Ltr 6-10-93
Enclosure

cc: Mr. Walt Ebersohl, Hazardous Waste Section Supervisor, Southeast District Office, WDNR

PRECISION ANALYTICAL LABORATORY

205 WEST GALENA
MILWAUKEE, WI 53212
(414) 272-5222

05/11/93

Analytical Report

MAY 13 1993

Attn: Tom Kroeger
Client: STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

WORK ID: 83931XG

Date Received: 04/29/93
Date Reported: 05/11/93

PAL ORDER #: 9304400

SAMPLE DESCRIPTION	LAB ID	DATE COLLECTED
B-8, S-1	01A	04/29/93
B-8, S-1	01B	04/29/93
B-8, S-1	01C	04/29/93
B-8, S-1	01D	04/29/93

Laboratory ID Number (Wisconsin DNR): 241369260

Certified By
Jeff Bushner, Linda Woodie

PRECISION ANALYTICAL LABORATORY

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW846
Sample ID: B-8, S-1			Lab ID:	9304400-01A		Collected: 04/29/93	
Appearance	solid		-	05/05/93		SJB	ASTM D4979
Cyanide, Free	BQL	10	ppm	05/05/93		SJB	
Color	brown		-	05/05/93		SJB	ASTM D4979
Flash Point, Closed Cup	> 210		degrees F	05/06/93		BHZ	1010
Free Liquids	0		%	05/05/93		SJB	9095
Layers	1		-	05/05/93		SJB	ASTM D4979
Odor	none		-	05/05/93		SJB	ASTM D4979
pH	7.97		units	05/03/93		BHZ	EPA 150.1
Phenol	0.74	0.05	mg/kg	05/07/93		MHM	EPA 420.1
% Chlorine	0.020		%	05/06/93		MHM	
Sulfide, Reactive	BQL	2.0	ppm	05/05/93		SJB	
Specific Gravity	1.91		-	05/05/93		SJB	ASTM D5057
Total Solids	83	1.0	%	05/07/93		BHZ	EPA 160.3
Sample ID: B-8, S-1			Lab ID:	9304400-01B		Collected: 04/29/93	
Metals Digestion (TCLP)	-		-	05/05/93		LDR	
TCLP (Silver)	0.040	0.030	mg/l	05/07/93		LJW	6010
TCLP (Arsenic)	BQL	0.010	mg/l	05/07/93		LJW	EPA 206.2
TCLP (Barium)	0.81	0.020	mg/l	05/07/93		LJW	6010
TCLP (Cadmium)	BQL	0.015	mg/l	05/07/93		LJW	6010
TCLP (Chromium)	BQL	0.020	mg/l	05/07/93		LJW	6010
TCLP (Copper)	BQL	0.025	mg/l	05/07/93		LJW	6010
TCLP (Mercury)	0.014	0.008	mg/l	05/10/93		BIK	EPA 245.1
TCLP Inorganic Extraction	-		-	05/03/93		LDR	
TCLP (Nickel)	0.086	0.050	mg/l	05/07/93		LJW	6010
TCLP (Lead)	BQL	0.20	mg/l	05/07/93		LJW	6010
TCLP (Selenium)	0.013	0.010	mg/l	05/07/93		LJW	EPA 270.2
TCLP (Zinc)	0.52	0.050	mg/l	05/07/93		LJW	6010
Sample ID: B-8, S-1			Lab ID:	9304400-01C		Collected: 04/29/93	
TCLP % Rec. (Silver)	99		%	05/07/93		LJW	6010
TCLP % Rec. (Arsenic)	105		%	05/07/93		LJW	
TCLP % Rec. (Barium)	100		%	05/07/93		LJW	6010
TCLP % Rec. (Cadmium)	94		%	05/07/93		LJW	6010
TCLP % Rec. (Chromium)	90		%	05/07/93		LJW	6010
TCLP % Rec. (Copper)	97		%	05/07/93		LJW	6010
TCLP % Rec. (Mercury)	110		%	05/10/93		BIK	
TCLP % Rec. (Nickel)	93		%	05/07/93		LJW	6010
TCLP % Rec. (Lead)	95		%	05/07/93		LJW	6010
TCLP % Rec. (Selenium)	98		%	05/07/93		LJW	
TCLP % Rec. (Zinc)	88		%	05/07/93		LJW	6010

BQL - Below Quantification Limit

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW846)
Sample ID: B-8, S-1			Lab ID:	9304400-01D		Collected: 04/29/93	
8240 - TCLP							8240
Benzene	BQL	100	ug/l	05/05/93		LJS	
Methyl Ethyl Ketone	BQL	200	ug/l	05/05/93		LJS	
Carbon tetrachloride	BQL	100	ug/l	05/05/93		LJS	
Chlorobenzene	BQL	100	ug/l	05/05/93		LJS	
Chloroform	BQL	100	ug/l	05/05/93		LJS	
1,2-Dichloroethane	BQL	100	ug/l	05/05/93		LJS	
1,4-Dichlorobenzene	BQL	200	ug/l	05/05/93		LJS	
1,1-Dichloroethene	BQL	100	ug/l	05/05/93		LJS	
Tetrachloroethene	300	100	ug/l	05/05/93		LJS	
Trichloroethene	180	100	ug/l	05/05/93		LJS	
Vinyl Chloride	BQL	100	ug/l	05/05/93		LJS	
8240 - TCLP % Rec.							8240
Benzene	91		%	05/05/93		LJS	
Methyl Ethyl Ketone	71		%	05/05/93		LJS	
Carbon tetrachloride	90		%	05/05/93		LJS	
Chlorobenzene	91		%	05/05/93		LJS	
Chloroform	90		%	05/05/93		LJS	
1,2-Dichloroethane	100		%	05/05/93		LJS	
1,4-Dichlorobenzene	82		%	05/05/93		LJS	
1,1-Dichloroethene	85		%	05/05/93		LJS	
Tetrachloroethene	85		%	05/05/93		LJS	
Trichloroethene	91		%	05/05/93		LJS	
Vinyl Chloride	80		%	05/05/93		LJS	
8270 - TCLP							8270
2,4-Dinitrotoluene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Hexachlorobenzene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Hexachloro-1,3-butadiene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Hexachloroethane	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Cresol (Total)	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Nitrobenzene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Pentachlorophenol	BQL	250	ug/l	05/10/93	05/07/93	JJB	
2,4,5-Trichlorophenol	BQL	50	ug/l	05/10/93	05/07/93	JJB	
2,4,6-Trichlorophenol	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Pyridine	BQL	50	ug/l	05/10/93	05/07/93	JJB	
8270 - TCLP % Rec.							8270
2,4-Dinitrotoluene	133		%	05/10/93	05/07/93	JJB	
Hexachlorobenzene	106		%	05/10/93	05/07/93	JJB	
Hexachloro-1,3-butadiene	88		%	05/10/93	05/07/93	JJB	
Hexachloroethane	103		%	05/10/93	05/07/93	JJB	
Cresol (Total)	37		%	05/10/93	05/07/93	JJB	
Nitrobenzene	112		%	05/10/93	05/07/93	JJB	
Pentachlorophenol	98		%	05/10/93	05/07/93	JJB	
2,4,5-Trichlorophenol	85		%	05/10/93	05/07/93	JJB	
2,4,6-Trichlorophenol	83		%	05/10/93	05/07/93	JJB	
Pyridine	102		%	05/10/93	05/07/93	JJB	
Organic Extraction	-		-	05/07/93		PTH	

BQL - Below Quantification Limit

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW846
TCLP Organic Extraction		-	-	05/03/93		LDR	
TCLP ZH Extraction		-	-	05/04/93		BHZ	

BQL - Below Quantification Limit

PRECISION ANALYTICAL LABORATORY

05/11/93

Report Comments

CLIENT: STS Consultants

PAL Order #: 9304400

All analysis as per approved method found in one or more of the following:
Standard Methods for Evaluation of Water and Wastewater, 17th Edition
Methods for Chemical Analysis for Water and Wastes, Revised March 1983, EPA 600/4-79-020
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition 1986 EPA SW846

Analysis performed or certified by Precision Analytical Laboratory

All TCLP analysis is corrected to include bias.

Ms. Ann Thoma

Construction Documentation Report

Demolition and Soil Remediation
2101-13 West Wells Street
Milwaukee, Wisconsin

October 29, 1993

Ms. Ann Thoma
7936 West Hampton Avenue
Milwaukee, WI 53218

Re: Construction Documentation Report for Demolition and Soil Remediation at 2101-13 West Wells Street, Milwaukee, Wisconsin -- STS Project 84161XF

Dear Ms. Thoma

STS Consultants is pleased to submit this report of the demolition and soil remediation activities at 2101-13 West Wells Street, Milwaukee, Wisconsin, 1993. We have provided three (3) copies of this report for your use and records.

Please call our office at 359-3030 if you have any questions or comments regarding this report. We are pleased to have assisted you with this demolition and soil remediation project.

Sincerely,

STS CONSULTANT, LTD.

Thomas G. Ryan, P.E.
Senior Project Engineer

Thomas W. Wolf, P.E.
Executive Vice President

TGR/bw-m11/84161XF/W.Wells 9-83

STS Project No. 84161XF

STS Consultants Ltd.
Consulting Engineers

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

Report

PROJECT

DOCUMENTATION REPORT FOR DEMOLITION AND SOIL REMEDIATION
AT 2101-13 WEST WELLS STREET
MILWAUKEE, WISCONSIN

CLIENT

MS. ANN THOMA
7936 WEST HAMPTON AVENUE
MILWAUKEE, WI 53218

Project No. 84161XF

Date OCTOBER 28, 1993

STS Consultants Ltd.
Consulting Engineers
11425 West Lake Park Drive
Milwaukee, Wisconsin 53224
414.359.3030/Fax 414.359.0822

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Demolition of the single story commercial building located in the eastern one-half of the 2100 block of West Wells Street in Milwaukee, Wisconsin was planned for July and August of 1993. The addresses of the building planned to be demolished include 2101 through 2113 West Wells Street. The owner of the building is Ms. Ann Thoma.

One of the former businesses within the 2101-13 West Wells Street building complex was a dry cleaning establishment. STS was retained by the owner to conduct a series of environmental investigations at the former dry cleaning facility to determine if tetrachloroethylene (PCE), a typical dry cleaning solvent, was present in the soils beneath and adjacent to the basement floor and walls. Environmental investigations conducted in 1992 by STS confirmed the presence of PCE in soils adjacent to the south basement wall and beneath a portion of the basement floor slab.

Ganos Co., Inc. (Ganos) from Brookfield, Wisconsin was retained by the owner to demolish the first floor concrete deck, a portion of the basement walls and to excavate the earlier identified PCE impacted soils at the site. Ganos' scope of work also included backfilling of the building basement area to the grade of the existing sidewalk along West Wells Street and North 21st Street. The above ground portion of the building complex was demolished by a separate contractor in July, 1993.

The concrete demolition activities began during the week of August 16, 1993. The initial excavation of the PCE impacted soils was conducted on August 25th, 1992. On August 25, approximately 153 tons of impacted soil was excavated by Ganos and transported to and disposed at the Waste Management of Wisconsin, Inc. - Parkview Landfill (Parkview) in Menomonee Falls, Wisconsin. Analysis of confirmation soil samples collected by STS indicated that PCE impacted soils remained in-place at the site in the central and eastern portions of the excavation area.

The excavation of the remaining quantity of PCE impacted soils was completed on October 5, 1993. On this date, approximately 259 tons of soil was excavated and disposed at the Parkview Landfill. Confirmation soil samples collected from the bottom and perimeter of the excavation area identified PCE concentrations less than the

laboratory detection limit, indicating that the PCE soils had been excavated from the impacted area. Prior to the soils excavation on October 5, water which had accumulated in the excavation area was pumped to the City of Milwaukee storm sewer system. Approval of the one-time discharge of this water was provided by the Milwaukee Metropolitan Sewerage District.

The interior of the basement area was subsequently backfilled with crushed concrete by Ganos during the remainder of the week of October 5 and during the week of October 11. The crushed concrete was placed in approximate one foot thick compacted lifts. Compaction of the backfill materials was verified by STS through the use of a nuclear density meter. In accordance with project specifications, the backfill materials were compacted to a minimum of 95 percent of the maximum dry density.

Minor grading of the soils around the perimeter of the backfill area was conducted to completed the backfill and site restoration activities during the week of October 11, 1993.

DOCUMENTATION REPORT FOR DEMOLITION AND SOIL REMEDIATION AT 2101-13 WEST WELLS STREET MILWAUKEE, WISCONSIN

1.O INTRODUCTION

This report presents the results of field observations and field and laboratory tests conducted during the demolition of various components of the building complex and the excavation of solvent impacted soils at the project site. The subject building was located at 2101-13 Wells Wells Street in the City of Milwaukee, Wisconsin and is located in the Southeast 1/4 of the Northwest 1/4 of Section 31, Township 7 North, and Range 22 East. The West Wells Street property is located approximately two (2) miles west of Lake Michigan.

STS Consultants, Ltd. (STS) was retained by Ms. Ann Thoma to document the concrete demolition activities, excavation of the solvent impacted soil and the backfilling operation. This report has been prepared to provide the site owner with a summary of the field and laboratory environmental sampling and analysis conducted as part of the soil excavation and backfill procedures. The sections in this report which follow discuss site conditions and laboratory analytical results of confirmation soil samples collected from the limits of the excavation area.

2.0 PURPOSE AND SCOPE

2.1 Purpose

This report has been prepared to provide documentation of environmental site remediation activities completed subsequent to the identification of solvent impacted soils beneath and adjacent to the former commercial building located at 2101-13 West Wells Street. Also provided is documentation of the backfill procedures used to fill the basement excavation area to the surrounding sidewalk elevations.

2.2 Scope

The scope of this project include the following:

- Observe the demolition of the first floor concrete deck and a portion of the basement walls.
- Observe and document excavation of solvent impacted soils at the site.
- Collect confirmation soil samples from the sidewalls and base of the completed excavation area for laboratory analysis for PCE.
- Provide chain-of-custody/laboratory analysis request documentation and initiate laboratory analysis of soil samples.
- Maintain client and regulatory agency communications throughout the duration of the project.
- Prepare this documentation report presenting findings and conclusions of the site assessment and remediation activities.

3.0 BUILDING DEMOLITION

In accordance with the project plans and specifications, Ganos' completed demolition of the following components of the 2101-13 West Wells Street Building:

- The first floor (ground level) deck. The majority of the deck was constructed of concrete, however, a portion of the deck in the western portion of the building was constructed of wood. Approximately 6,000 square feet of deck was removed.
- The small retaining wall and concrete side walk at the rear of the building.
- The upper two (2) feet of the perimeter basement foundation walls, in accordance with City of Milwaukee Demolition Specifications. Visual inspections and field measurements by STS documented the demolition and removal of the upper two (2) feet of the basement walls.
- The basement floor slab in the southern portion of the former 2105 and 2107 West Wells Street section of the building in the area identified as containing PCE impacted soils.

The concrete demolition activities were conducted during the week of August 16, 1993. The demolished concrete was transported by Ganos either to the Parkview Landfill for disposal or to Stark Asphalt or Wisconsin Wrecking for processing and reuse. Based on our inspections, the demolition procedures compiled with the City of Milwaukee as well as the STS specifications for this project.

Ganos excavated along the utility pipelines extending from the basement walls or floor to the property lot line. The pipelines were abandoned either by sealing the end of the line with concrete or in the case of the water main by installing a brass coupling and cap.

4.0 SOIL EXCAVATION ACTIVITIES

An environmental site investigation was conducted by STS in 1992 at the West Wells Street property to identify the approximate lateral extent of the PCE impacted soils at the site. The 1992 site investigation identified the presence of the PCE impacted soils in an approximate 25 foot by 35 foot area in the south central portion of the basement in the former 2107 West Wells Street address which contained the dry cleaning operation. Based on an evaluation of soil conditions, the impacted soils were estimated to be present to a depth of from 1 to 2 feet below the basement floor slab in this area. PCE impacted soils were also identified adjacent to the basement wall in this area extending from the ground surface for a depth of approximately 10 feet in the area immediately south of the wall. As discussed in Section 3.0, Ganos' demolished and removed the basement floor slab in the area previously identified as overlying the PCE impacted soils.

STS initiated discussions with Waste Management of Wisconsin, Inc. (WMWI) regarding disposal of the PCE impacted soils at the Parkview Landfill in Menomonee Falls, Wisconsin. Laboratory analytical results identifying the chemical constituents in the soils to be excavated were submitted to WMWI for review and approval for landfill disposal. After review of the soil characterization data, WMWI requested that the Wisconsin Department of Natural Resources (WDNR) also review the soil characterization data and indicate that the soils would not be classified as a hazardous waste under WDNR or USEPA hazardous waste regulations. As defined in the hazardous waste regulations, a "spent" material is a waste that has been used in an industrial process and as a result of contamination can no longer serve the purpose for which it was produced without further processing. Waste containing spent halogenated solvents, including PCE, meeting certain criteria are characterized as a hazardous waste (F002). A soil (waste) material which releases PCE in concentrations greater than 0.7 parts per million (ppm) as determined by the Toxicity Characteristic Leaching Procedure (TCLP) may also be classified as a hazardous waste because the waste exhibits the characteristic of toxicity, as specified in the WDNR hazardous waste regulations. For these reasons, WMWI requested concurrence from the WDNR that the PCE impacted soils would not be classified as hazardous as a requirement of approval for disposal at the Parkview landfill.

Correspondence between STS and WDNR with regard to the hazardous waste classification of the PCE impacted soils is provided in Appendix A. As discussed in this correspondence, the WDNR requested that the history of industrial (dry cleaning) operations at the site be investigated to determine if the PCE in the soil was a "spent" material or if the PCE in the soil was unused solvent that was released to the soil. This determination would likely be important in the characterization of the soils as hazardous or not. The history of the dry cleaning operation at the facility was investigated by STS and it could not be determined if the PCE in the soils was "spent" or unused solvent material. Laboratory analytical data included with the June 10, 1993 STS letter demonstrated that the solvent impacted soils are not a hazardous waste due to the toxicity characteristic. Based on the unknown source of the PCE and because the soil did not exhibit the characteristic of toxicity, STS determined that the soils should not be classified as hazardous under state regulations. Based on this analysis, the WDNR concurred with the STS determination that the solvent impacted soils when excavated would not be characterized as a hazardous waste. The July 1 and July 6, 1993 correspondence in Appendix A was also submitted to WMWI in conjunction with the remaining waste characterization data. Based on the review of this information, WMWI approved disposal of the PCE impacted soils at the Parkview Landfill. The WMWI waste disposal application form and approval for disposal are provided in Appendix B.

The initial excavation of the PCE impacted soils was conducted by Ganos on August 25, 1992. An STS environmental technician was on-site during the soil excavation to document project activities and collect confirmation soil samples for laboratory analysis. A total of 153.81 tons of contaminated soil was excavated, transported and disposed of at the Parkview Landfill in Menomonee Falls, Wisconsin on August 25. The excavation extended to a depth of approximately two (2) feet below the concrete slab, in general conformance with the planned excavation depth. The excavation area is shown on the site plan in Appendix C.

The STS environmental technician collected seven (7) confirmation soil samples at the completion of the excavation activities and submitted these samples to the Precision Analytical Laboratory (Precision) in Milwaukee, Wisconsin for analysis for PCE and trichloroethene (TCE). The location of the samples is shown on the excavation site plan

in Appendix C and the analytical results are listed in Table 1 below and provided in Appendix D.

Table 1
Laboratory Analytical Results for the
Soil Samples Collected on August 25, 1993

Soil Sample No.	PCE (ppb)	TCE (ppb)
S-5	BQL	BQL
S-6	BQL	BQL
S-7	18,000	BQL
S-8	BQL	BQL
S-13	1,200	BQL
S-15	25	BQL
S-16	3,300	BQL

BQL = Below Quantification Limit of 1.1 ppb or 1.2 ppb

Detections of TEC were not reported in any of the samples. PCE was not detected in three (3) of the seven (7) samples collected. However, PCE was identified for four (4) of the soil samples tested. The sample results indicated that soils impacted with PCE remained in-place in the eastern portion of the excavation area and that PCE impacted soils have been successfully removed from the western portion of the excavation area. Based on these test results, a second excavation to remove the remaining impacted soils was planned.

Ganos' completed the excavation of the remaining impacted soils on October 5, 1993. On that date, 259.05 tons of soil was excavated and transported to the Parkview Landfill for disposal. The STS environmental technician collected three (3) additional confirmation soil samples which were submitted to Precision for analysis for PCE. The analytical results for these three (3) samples, which are shown on the excavation site plan, were below the laboratory quantification limit and indicate that the remaining impacted soils were excavated. The laboratory results for this analysis are provided in Appendix E. A total of approximately 413 tons of soil were excavated from the site.

An estimated 30,000 gallons of water accumulated in the excavation area during the period from August 25 through October 5, 1993, between the two (2) soil excavation events. This water resulted, in large part, from the frequent and intense rainfall received in the Milwaukee area during the month of September, 1993. Because PCE impacted soils remained in-place after the initial excavation activities on August 25 and the accumulated water had contacted these soils, it was necessary to collect a sample of the ponded water in the excavation area for analysis for PCE to evaluate disposal alternatives for the water. A sample of the water was collected by STS on September 10 and submitted to Precision for analysis. The water in the excavation area sample had a PCE concentration of 45 ppb.

STS prepared and submitted the form "Notice of Intent to Discharge Industrial Wastewater" to the Milwaukee Metropolitan Sewerage District (MMSD) on September 30, 1993. This application requested MMSD approval to discharge the water from the excavation into the combined sewer system adjacent to the West Wells Street property. Approval was received from MMSD on October 1, 1993 for the one-time discharge of this water to the sewer system. The application form and the MMSD approval are provided in Appendix F. Subsequent to receiving this approval, Ganos pumped the water from the excavation area to the adjacent combined storm and sanitary sewer system. This water was conveyed to the Jones Island Wastewater Treatment Plant.

5.0 BACKFILL OF BASEMENT INTERIOR

Backfill of the basement interior area including the area resulting from excavation of the PCE impacted soils was completed by Ganos from October 6 through October 12, 1993. Ganos utilized crushed concrete as the backfill material. This material is commonly used to backfill excavation areas and provides a stable and strong backfill material. The backfill materials were placed in approximate one foot lifts and compacted with a vibratory drum compactor. The backfill materials were spread with a dozer prior to compaction. STS collected a representative sample of the backfill material and performed a Modified Proctor Test (ASTM D-1557) to establish the maximum density for field testing purposes. The maximum dry density of the sample tested was 126.6 pounds per cubic foot and the optimum moisture content was 9.3 percent.The test results for this analysis are provided in Appendix G.

STS performed twelve (12) nuclear density tests on the compacted fill as the basement area was backfilled. The density testing results are provided in Table 2 and the field reports in Appendix G. A Troxler 3400 nuclear density meter was used for the density testing. Each of the density tests exhibited a compaction percentage of 95% or greater of the Modified Proctor maximum dry density. Visual observations of the compaction process also indicated that no further densification of the soils was occurring at the completion of compaction of each lift. Based on the field and laboratory tests conducted on the backfill materials and our observations of the backfilling and compaction procedures, we have determined that backfilling of the basement excavation area was completed in accordance with the project plans and specifications.

Table 2
Density Test Results on Backfill Materials

Depth Below Ground Surface (ft)	Dry Density (pcf)	Percent Compaction
6	120.0	95
6	120.1	95
6	124.3	98
6	123.7	98
6	123.3	97
5	123.0	97
5	120.2	95
5	123.4	97
3	123.1	97
3	122.9	97
3	123.3	97
3	125.2	99
0	124.3	98
0	124.2	98
0	125.4	99

6.0 PROJECT SUMMARY

Based on our observations and field and laboratory analysis conducted for this project, we have the following findings and conclusions:

- Approximately 413 tons of PCE impacted soils were excavated from the 2101-13 West Wells Street site in August and October of 1993.
- The PCE impacted soils were disposed at the WMWI - Parkview Landfill site.
- Confirmation soils samples collected from the bottom and sidewalls of the impacted soil excavation area did not exhibit PCE or TCA concentrations above the laboratory quantification limit. The analysis of these samples indicates the excavation was successful in removing the impacted soils.
- Backfilling of the basement interior was completed in accordance with the project specifications. The backfill materials were placed in approximate one (1) foot lifts and compacted to a minimum of 95 percent of the Modified Proctor maximum dry density.

APPENDICES

Appendix A - Correspondence with the Department of Natural Resources Regarding the PCE Impacted Soils

Appendix B - Approval for Disposal of the PCE Impacted Soils From Waste Management Inc. at the Parkview Landfill

Appendix C - Site Plan Showing Contaminated Soil Removal Areas

Appendix D - Laboratory Analytical Results for Soil Samples Collected on August 25, 1993

Appendix E - Laboratory Analytical Results for Soil Samples Collected on October 5, 1993

Appendix F - Permit Application and Permit Issued by the Milwaukee Metropolitan Sewerage District for Discharge of Water from the Excavation Area

Appendix G - Modified Proctor Test and Density Test Results

APPENDIX A

CORRESPONDENCE WITH THE DEPARTMENT OF NATURAL RESOURCES REGARDING THE PCE IMPACTED SOILS

June 10, 1993

Ms. Pam Mylotta
Environmental Repair Project Manager
Wisconsin Department of Natural Resources
Southeast District Office
Richards Street Annex
4041 North Richards Street
Milwaukee, WI 53212

RE: Solvent Impacted Soils at 2111 West Wells Street, Milwaukee, Wisconsin -- STS Project No. 84161XF

Dear Pam:

This letter has been prepared to confirm our recent phone conversation regarding the solvent impacted soils located at 2111 West Wells Street in the City of Milwaukee, Wisconsin. The subject property owned by Ms. Ann Thoma containing the solvent impacted soils is currently undergoing demolition. As part of the demolition activities, we anticipate that soils impacted with the solvents tetrachloroethylene and trichloroethylene will be excavated and transported to and disposed of at a sanitary landfill site.

The identification of the tetrachloroethylene and trichloroethylene impacted soils was as a result of a soil boring investigation conducted by STS Consultants, Ltd. (STS) on the subject property. Soil PID readings and laboratory analyses performed on soil samples during the soil boring investigation indicated the presence of tetrachloroethylene and trichloroethylene in the site soils. STS drilled an additional boring in the area on the site exhibiting the highest field and laboratory test results for these two parameters based on the findings from the initial investigations. The soil sample collected from this boring was submitted to Precision Analytical Laboratories, Inc. in Milwaukee for Protocol A Analysis required by Waste Management of Wisconsin, Inc. for acceptance of impacted soils at their landfill sites. The results of this laboratory testing are enclosed with this letter.

The specific source of the solvents in the soil is unknown. One likely source could be spillage or leakage of solvents when a dry cleaning operation occupied the building. The dry cleaning operation culminated in 1983. There is also no evidence that the released solvents were mishandled wastes or off-specification materials which would result in a designation as a listed hazardous waste.

Therefore, the characteristic hazardous waste criteria should be considered when evaluating these soils and the available disposal options. The results of the Toxicity Characteristic Leaching Procedure (TCLP) test on the soil sample collected at the location of the highest PID readings is as follows:

Parameter	TCLP TestResult mg/l	Regulatory Level mg/l
Tetrachloroethylene	0.42	0.7
Trichloroethylene	0.32	0.5

These results indicate that even soils in the most highly impacted area are not classified as characteristically hazardous and could be managed as a solid waste.

The estimated quantity of impacted soils at this site is 150 cubic yards. The impacted soils are present beneath a portion of the basement floor which will be removed to expose the soils for excavation and adjacent to the south foundation basement wall.

Based on this analysis, it appears to STS that the solvent impacted soils should not be classified as a hazardous waste under current state and federal regulations. We request that your office review this information and issue a letter to STS providing your concurrence with this assessment. The demolition activities for the basement area of the building including the excavation of the solvent impacted soils is scheduled to take place in July of this year. As such, we respectfully request your review of this letter as soon as possible to allow the securing of the necessary landfill disposal permits.

If there are any questions concerning this letter or if more information is needed, please call our office as soon as possible. Thank you in advance for your efforts to review this information.

Very truly yours,

STS CONSULTANTS, LTD.

Thomas G. Ryan, P.E.
Project Manager

Kathryn R. Huibregtse, P.E.
Principal Engineer

TGR/ed-m11/84161XF/WDNR Ltr 6-10-93
Enclosure

cc: Mr. Walt Ebersohl, Hazardous Waste Section Supervisor, Southeast District Office, WDNR

PRECISION ANALYTICAL LABORATORY
205 WEST GALENA
MILWAUKEE, WI 53212
(414) 272-5222

05/11/93

Analytical Report

MAY 13 1993

Attn: Tom Kroeger
Client: STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

WORK ID: 83931XG

Date Received: 04/29/93
Date Reported: 05/11/93

PAL ORDER #: 9304400

SAMPLE DESCRIPTION	LAB ID	DATE COLLECTED
B-8, S-1	01A	04/29/93
B-8, S-1	01B	04/29/93
B-8, S-1	01C	04/29/93
B-8, S-1	01D	04/29/93

Laboratory ID Number (Wisconsin DNR): 241369260

Certified By
Jeff Bushner, Linda Woodie

PRECISION ANALYTICAL LABORATORY

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW8
Sample ID: B-8, S-1			Lab ID:	9304400-01A		Collected: 04/29/93	
Appearance	solid		-	05/05/93		SJB	ASTM D497
Cyanide, Free	BQL	10	ppm	05/05/93		SJB	
Color	brown		-	05/05/93		SJB	ASTM D497
Flash Point, Closed Cup	> 210		degrees F	05/06/93		BHZ	1010
Free Liquids	0		%	05/05/93		SJB	9095
Layers	1		-	05/05/93		SJB	ASTM D497
Odor	none		-	05/05/93		SJB	ASTM D497
pH	7.97		units	05/03/93		BHZ	EPA 150.1
Phenol	0.74	0.05	mg/kg	05/07/93		MHM	EPA 420.1
% Chlorine	0.020		%	05/06/93		MHM	
Sulfide, Reactive	BQL	2.0	ppm	05/05/93		SJB	
Specific Gravity	1.91		-	05/05/93		SJB	ASTM D505
Total Solids	83	1.0	%	05/07/93		BHZ	EPA 160.3
Sample ID: B-8, S-1			Lab ID:	9304400-01B		Collected: 04/29/93	
Metals Digestion (TCLP)	-		-	05/05/93		LDR	
TCLP (Silver)	0.040	0.030	mg/l	05/07/93		LJW	6010
TCLP (Arsenic)	BQL	0.010	mg/l	05/07/93		LJW	EPA 206.2
TCLP (Barium)	0.81	0.020	mg/l	05/07/93		LJW	6010
TCLP (Cadmium)	BQL	0.015	mg/l	05/07/93		LJW	6010
TCLP (Chromium)	BQL	0.020	mg/l	05/07/93		LJW	6010
TCLP (Copper)	BQL	0.025	mg/l	05/07/93		LJW	6010
TCLP (Mercury)	0.014	0.008	mg/l	05/10/93		BIK	EPA 245.1
TCLP Inorganic Extraction	-		-	05/03/93		LDR	
TCLP (Nickel)	0.086	0.050	mg/l	05/07/93		LJW	6010
TCLP (Lead)	BQL	0.20	mg/l	05/07/93		LJW	6010
TCLP (Selenium)	0.013	0.010	mg/l	05/07/93		LJW	EPA 270.2
TCLP (Zinc)	0.52	0.050	mg/l	05/07/93		LJW	6010
Sample ID: B-8, S-1			Lab ID:	9304400-01C		Collected: 04/29/93	
TCLP % Rec. (Silver)	99		%	05/07/93		LJW	6010
TCLP % Rec. (Arsenic)	105		%	05/07/93		LJW	
TCLP % Rec. (Barium)	100		%	05/07/93		LJW	6010
TCLP % Rec. (Cadmium)	94		%	05/07/93		LJW	6010
TCLP % Rec. (Chromium)	90		%	05/07/93		LJW	6010
TCLP % Rec. (Copper)	97		%	05/07/93		LJW	6010
TCLP % Rec. (Mercury)	110		%	05/10/93		BIK	
TCLP % Rec. (Nickel)	93		%	05/07/93		LJW	6010
TCLP % Rec. (Lead)	95		%	05/07/93		LJW	6010
TCLP % Rec. (Selenium)	98		%	05/07/93		LJW	
TCLP % Rec. (Zinc)	88		%	05/07/93		LJW	6010

BQL - Below Quantification Limit

CLIENT:STS Consultants

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW8
Sample ID: B-8, S-1			Lab ID:	9304400-01D		Collected: 04/29/93	
8240 - TCLP							8240
Benzene	BQL	100	ug/l	05/05/93		LJS	
Methyl Ethyl Ketone	BQL	200	ug/l	05/05/93		LJS	
Carbon tetrachloride	BQL	100	ug/l	05/05/93		LJS	
Chlorobenzene	BQL	100	ug/l	05/05/93		LJS	
Chloroform	BQL	100	ug/l	05/05/93		LJS	
1,2-Dichloroethane	BQL	100	ug/l	05/05/93		LJS	
1,4-Dichlorobenzene	BQL	200	ug/l	05/05/93		LJS	
1,1-Dichloroethene	BQL	100	ug/l	05/05/93		LJS	
Tetrachloroethene	300	100	ug/l	05/05/93		LJS	
Trichloroethene	180	100	ug/l	05/05/93		LJS	
Vinyl Chloride	BQL	100	ug/l	05/05/93		LJS	
8240 - TCLP % Rec.							8240
Benzene	91		%	05/05/93		LJS	
Methyl Ethyl Ketone	71		%	05/05/93		LJS	
Carbon tetrachloride	90		%	05/05/93		LJS	
Chlorobenzene	91		%	05/05/93		LJS	
Chloroform	90		%	05/05/93		LJS	
1,2-Dichloroethane	100		%	05/05/93		LJS	
1,4-Dichlorobenzene	82		%	05/05/93		LJS	
1,1-Dichloroethene	85		%	05/05/93		LJS	
Tetrachloroethene	85		%	05/05/93		LJS	
Trichloroethene	91		%	05/05/93		LJS	
Vinyl Chloride	80		%	05/05/93		LJS	
8270 - TCLP							8270
2,4-Dinitrotoluene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Hexachlorobenzene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Hexachloro-1,3-butadiene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Hexachloroethane	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Cresol (Total)	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Nitrobenzene	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Pentachlorophenol	BQL	250	ug/l	05/10/93	05/07/93	JJB	
2,4,5-Trichlorophenol	BQL	50	ug/l	05/10/93	05/07/93	JJB	
2,4,6-Trichlorophenol	BQL	50	ug/l	05/10/93	05/07/93	JJB	
Pyridine	BQL	50	ug/l	05/10/93	05/07/93	JJB	
8270 - TCLP % Rec.							8270
2,4-Dinitrotoluene	133		%	05/10/93	05/07/93	JJB	
Hexachlorobenzene	106		%	05/10/93	05/07/93	JJB	
Hexachloro-1,3-butadiene	88		%	05/10/93	05/07/93	JJB	
Hexachloroethane	103		%	05/10/93	05/07/93	JJB	
Cresol (Total)	37		%	05/10/93	05/07/93	JJB	
Nitrobenzene	112		%	05/10/93	05/07/93	JJB	
Pentachlorophenol	98		%	05/10/93	05/07/93	JJB	
2,4,5-Trichlorophenol	85		%	05/10/93	05/07/93	JJB	
2,4,6-Trichlorophenol	83		%	05/10/93	05/07/93	JJB	
Pyridine	102		%	05/10/93	05/07/93	JJB	
Organic Extraction	-		-	05/07/93		PTH	

BQL - Below Quantification Limit

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW8
TCLP Organic Extraction	-	-		05/03/93		LDR	
TCLP ZH Extraction	-	-		05/04/93		BHZ	

BQL - Below Quantification Limit

PRECISION ANALYTICAL LABORATORY

05/11/93

Report Comments

CLIENT: STS Consultants

PAL Order #: 9304400

All analysis as per approved method found in one or more of the following:
Standard Methods for Evaluation of Water and Wastewater, 17th Edition
Methods for Chemical Analysis for Water and Wastes, Revised March 1983, EPA 600/4-79-020
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition 1986 EPA SW846

Analysis performed or certified by Precision Analytical Laboratory

All TCLP analysis is corrected to include bias.

WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District - Annex
Post Office Box 12436
4041 N. Richards Street
Milwaukee, Wisconsin 53212
TELEPHONE: 414-961-2727
TELEFAX #: 414-961-2770

June 24, 1993

In Response Refer To: EPA ID #WID
FID
County of Milw.
HW/NOTIF

JUN 28 1993

Thomas G. Ryan, P.E.
Project Manager
STS Consultants Ltd.
11425 West Lake Park Drive
Milwaukee, WI 53224

Kathryn R. Huibregtse, P.E.
Principal Engineer
STS Consultants Ltd.
11425 West Lake Park Drive
Milwaukee, WI 53224

Dear Mr. Ryan and Ms. Huibregtse:

RE: Solvent Impacted Soils at 2111 West Wells Street, Milwaukee, Wisconsin -- STS Project No. 84161XF

The purpose of this letter is to respond to your June 10, 1993 letter regarding classification of solvent impacted soils located at 2111 West Wells Street in the City of Milwaukee. Your letter states that TCLP test results for a soil sample collected from a soil boring at this site were 0.42 mg/l for tetrachloroethylene and 0.32 mg/l for trichloroethylene. These levels are below the regulatory levels of 0.7 mg/l for tetrachloroethylene and 0.5 mg/l for trichloroethylene in Table I of s. NR 605.08, Wis. Adm. Code. Your letter also says that the specific source of the solvents in the soil is unknown. It indicates that one likely source could be spillage or leakage of solvents when a dry cleaning operation, which closed in 1983, occupied the building.

As you know it is the generator's responsibility to determine if a solid waste is a hazardous waste as required by s. NR 605.01, Wis. Adm. Code. A part of this determination involves reviewing the history of industrial operations at the site. For example, the owner/operator of the dry cleaning operation and former employees could be interviewed to determine if releases of solvents caused the soil contamination. In addition, you should review the Departments of Natural Resources' files to determine if there is information on the dry cleaning operation. These steps are necessary to determine if the waste is listed as a hazardous waste. In order for the Department to concur with your determination that excavated soils from the 2111 West Wells Street site are not hazardous, we need an understanding of the process used, to make a listed hazardous waste determination.

If you have questions on this letter, please contact me at 414-961-2713.

Sincerely,

Walter A. Ebersohl
Hazardous Waste Program Supervisor

c: Pam Mylotta - SED
Hazardous Waste Section - SW/3

July 1. 1993

Mr. Walt Ebersohl
Hazardous Waste Program Supervisor
Wisconsin Department of Natural Resources
Southeast District Annex
4140 N. Richards Street
P.O. Box 12436
Milwaukee. WI 53212

RE: Solvent Impacted Soils at 2111 W. Wells Street. Milwaukee. Wisconsin -- STS Project 84161XF

Dear Mr. Ebersohl:

Thank you for your letter of June 24. 1993 regarding the classification of solvent impacted soils located at 2111 W. Wells Street in the City of Milwaukee. Your letter stated that a review of the history of industrial operations at this site including. if possible. a determination as to the exact source of the solvent release to the soils at the site is necessary in order to determine if the impacted soils would be considered a listed hazardous waste. It was recommended also that STS review the Department of Natural Resources files to determine if there was information previously compiled on the dry cleaning operation.

In early 1992. during the course of performing a Phase I environmental audit of this property. STS conducted a detailed title history search at the Milwaukee City Hall office of Records and Research. The record search was completed for the building complex known as 2101 to 2113 W. Wells Street. The Milwaukee City Hall records detailed the property ownership from 1926 to the present time. The individual property owners of record were as follows:

Owner	Date Property Purchased
Samuel Michel	< 1926
Aaron Cohen	1926
Cohen and Huxley	1944
Anne Thoma	1978

The title history records do not indicate past uses of the parcel which could have affected the environmental condition of the property.

Because there are several buildings associated with this property. the individual tenants of the property were also researched. City Directories archived by the Milwaukee Historical Society were used to determine individual building tenancy. The individual tenants appear to have been as follows:

STS Consultants Ltd.
Consulting Engineers

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

2101 West Wells Street

1925 to 1970 - grocery store
1970 to 1975 - vacant
1975 to 1980 - pet supply store
1980 to present - vacant

2105 West Wells Street

1930 to 1940 - dry goods store
1940 to 1950 - restaurant
1950 - 1980 - dry cleaner
1980 to present - vacant

2107 West Wells Street

1930 to 1950 - barber
1950 to present - no longer listed

2111 West Wells Street

1925 to 1935 - residence
1935 to present - tavern

2113 West Wells Street

1925 to 1930 - grocery store
1930 to 1935 - Bell Dye Works
1935 to 1940 - beauty parlor
1940 to 1975 - store
1975 to present - vacant (extension of 2111 tavern)

The preceding dates were confirmed on a five-year interval and the information was used only to give a general sense of tenancy through the period of record. Subsequent conversations with Anne Thoma identified that the dry cleaner, did, in fact, vacate the 2105 West Wells Street address in 1983. Discussions with Ms. Thoma also indicated that the apparent cause of the cessation of business operations was the failure to make rental payments leading to the vacating of the property.

The Wisconsin Department of Natural Resources (WDNR) has compiled a list of sites in the Southeastern District which have the potential to cause environmental impairment. The WDNR lists were also reviewed as part of our 1992 work on the property to determine whether environmental impairment on the property could be due to the presence of landfills, spill incidents or other factors in the vicinity of the site. The state-generated lists reviewed relative to the West Wells Street property were as follows:

- Registry of Waste Disposal Sites, dated February 1990.
- Active Landfills in Wisconsin, dated November 1933.
- Inventory of Sites or Facilities Which May Cause or Threaten to Cause Environmental Pollution, dated December 1991.
- Hazard Ranking List, dated March 1988.
- Leaking Underground Storage Tank (LUST) List, dated December 1991.
- List of Chemical Spills reported from 1978 through July 1990.

The following paragraphs discuss potential sites of concern based upon the list review.

Two (2) underground storage tank sites (USTs) were identified in the vicinity of the subject parcel. The first site is at Boehck Equipment Company located at 2400 West Clybourn Avenue. This site is approximately 1,500 feet southwest of the subject parcel in a topographical and likely hydraulic downgradient location. The potential for the Boehck UST to impact the West Wells Street property is considered very low.

The second site was determined to be one block to the north, northeast of the subject parcel, likely in an upgradient location. This site is at the Sinai Samaritan Medial Center at 2000 West Kilbourn Street. The file indicates that a release of No. 6 fuel oil from overfilling occurred in the early 1980's, however, the hospital denies this claim according to the WDNR record. PCBs from a transformer explosion also were reported at this site. No remarks on the PCB spill were noted from the hospital and no remedial action has been taken according to the file notes. The WDNR file did not contain additional information regarding either reported incident.

The remaining lists including the List of Chemical Spills, did not identify sites of significant concern in the near vicinity of the West Wells Street property.

Discussions with the City of Milwaukee Health Department, who is the licensing agency for dry cleaners, identified the operator of the dry cleaner as Eagle Cleaners. The Health Department file for Eagle Cleaners indicated the following:

- The listed address for Eagle Cleaners was 2105 West Wells Street.
- On December 5, 1979, it was noted that the dry cleaning machine at the facility was not operating.
- In February, April and June of 1980, the file indicates that the dry cleaning machine was still not operating.
- On November 5, 1980, the file contains information stating that dry cleaning no longer took place at the facility but that the business operated as a drop off and collection point for laundry. It appears that the actual dry cleaning took place at an off-site facility.

There were no other operational details in the Health Department file.

Eagle Cleaners is no longer listed in the City of Milwaukee Yellow Pages as a dry cleaning establishment. Efforts made to locate personnel from the former Eagle Cleaners business were unsuccessful. The Association of Commerce in the City of Milwaukee was contacted to determine if Eagle Cleaners was currently registered at a business. A review of their current business listings did not identify Eagle Cleaners. The Division of Corporations in the Secretary of State's Office in Madison was also contacted. This office confirmed that there is not current incorporation of a business titled "Eagle Cleaners" or Eagle Drycleaners" in the State of Wisconsin.

We believe the above described investigations represent a reasonable effort to investigate the history of the dry cleaning operation. Exhaustive efforts would have to be made at this point to locate the operators of the dry cleaning business, if indeed this would be possible. With the inability to locate the corporation, it is not possible to locate the facility owners. If the owners could be located, it is still questionable whether or not reliable information would be obtained regarding the handling of the dry cleaning materials, given the questionable business practices at the facility.

Because the exact source of the solvents in the soil is unknown, in our opinion the toxicity characteristic criteria should be used to determine if these soils should be identified and managed as hazardous waste. TCLP testing conducted in May of 1993 resulted in data that indicates soils from the most highly impacted area do not contain solvents at concentrations above the toxicity criteria and therefore could be managed as a solid waste with the WDNR's concurrence.

We hope the information provided in this letter will enable the Department to make a determination as to whether or not the solvent-impacted soils are a hazardous waste. If additional information is needed by your office in order to concur with our determination that the soils at this site are not a hazardous waste, please contact us as soon as possible.

Very truly yours,

STS CONSULTANTS, LTD.

Thomas G. Ryan, P.E.
Project Manager

Kathryn R. Huibregtse, P.E.
Principal Engineer

TGR/sb-m11/84161XF/WDNR/Wells St.

WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Southeast District - Annex
Post Office Box 12436
4041 N. Richards Street
Milwaukee, Wisconsin 53212
TELEPHONE: 414-961-2727
TELEFAX #: 414-961-2770

July 6, 1993

JUL 8 1993

In Response Refer To: EPA ID #WID
FID
County of Milw.
HW/Not.

Mr. Thomas G. Ryan, P.E.
Project Manager
STS Consultants Ltd.
11425 West Lake Park Drive
Milwaukee, Wisconsin 53224

Ms. Kathryn R. Huibregtse, P.E.
Principal Engineer
STS Consultants Ltd.
11425 West Lake Park Drive
Milwaukee, Wisconsin 53224

Dear Mr. Ryan and Ms. Huibregtse:

RE: Solvent Impacted Soils at 2111 W. Wells Street, Milwaukee, Wisconsin -- STS Project 84161XF

I have reviewed your July 1, 1993 letter explaining your title and record search and DNR file review for information explaining industrial and business operations at 2111 W. Wells Street, Milwaukee, Wisconsin. This information, which was submitted in response to my June 24, 1993 letter, is needed in order to determine if the solvent impacted soils at 2111 W. Wells Street, when excavated, would be classified as a listed hazardous waste.

I agree with the conclusion in your letter that a reasonable effort has been made to investigate the history of the site including the history of the dry cleaning operation, which was a potential source of the solvent contaminated soils. Therefore, based on the information presented in your letter, the Department concurs with your waste determination that the solvent impacted soils when excavated are not listed hazardous wastes. In addition, you have provided analytical data, in your June 10, 1993 letter, to show that the solvent impacted soils are not characteristic hazardous wastes.

Sincerely,

Walter A. Ebersohl

Walter A. Ebersohl
Hazardous Waste Program Supervisor

c: Hazardous Waste Section
Pam Mylotta - SED

APPENDIX B

APPROVAL FOR DISPOSAL OF THE PCE IMPACTED SOILS FROM WASTE MANAGEMENT INC. AT THE PARKVIEW LANDFILL

Parkview Recycling and Disposal Facility
N96 W13475 County Line Road
Menomonee Falls, WI 53051
(414) 253-8620 • FAX (414) 253-1322

A Waste Management Company

July 27, 1993

Mr. Tom Ryan
STS Consultants, Ltd.
11425 W Lake Park Drive
Milwaukee, WI 53224

Dear Mr. Ryan:

Please have the generator sign the attached Special Waste Service Agreement, and fill in their mailing address and phone number. Return it to me as soon as possible. We can then accept the waste subject to the terms of the agreement.

If you or the generator has any questions please do not hesitate to call me at 414/253-8620.

Sincerely,

Peggy Slind
Special Waste Coordinator

pls

Enclosures

STS Letter of Transmittal

11425 West Lake Park Drive
Milwaukee, WI 53224
414-359-3030/414-359-0822 (FAX)

To: Peggy Slind
Waste Management Inc.
Parkview Landfill
N96 W 13475 County Line Road
Menomonee Falls, WI 53051

Date: 7/22/93 STS Project No: 8416 1XF

Project: 2101-13 West Wells Street

From: Tom Ryan

Location: Milwaukee WI

We are Sending the Following Item(s):

- [x] Attached
- [ ] Via Fax
- [ ] Under Separate Cover

- [ ] Prints
- [ ] Copy of Letter
- [ ] Proposal/Report
- [ ] Shop Drawings
- [ ] Test Results
- [ ] Samples
- [ ] Specifications
- [ ] Boring Logs
- [ ] Change Order
- [ ] Other

They are Transmitted as Indicated:

- [x] For Approval
- [ ] As Requested
- [ ] For Your Use
- [ ] For Review and Comment

Remarks: Peggy,

As we discussed on the phone this morning, enclosed please find the "Generator's Waste Profile Sheet" for the soils from the above project, for your review and approval. Please call if there are any questions.

Tom Ryan
STS Representative

MIDWEST REGION
GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Waste Profile Sheet Co
MW 009293

Proposed Management Facility Parkview Landfill

This form is to be used to comply with the requirements of a waste agreement.

INSTRUCTIONS FOR COMPLETING THIS FORM ARE ATTACHED

Decision Expiration Date: / /

A. WASTE GENERATOR INFORMATION

1. Generator Name: Ms. Anne Thoma
2. SIC Code: 7216
3. Facility Address (site of waste generation): 2101-13 West Wells Street
4. Generator City, State: Milwaukee, Wisconsin
5. Zip/Postal Code: 53212
6. State ID #:
7. Technical Contact: Tom Ryan
8. Phone: (414) 359 - 3050

B. WASTE STREAM INFORMATION (See Instructions)

1. Name of Waste: Contaminated Soil
2. Process Generating Waste: Spill Clean Up
3. Amount/Units: 150 cubic yards
4. Type A ☒ Type B ☐
5. Special Handling Instructions/Supplemental Information: NONE
6. Incidental Waste Types and Amounts: NONE

C. TRANSPORTATION INFORMATION

1. Method of Shipment: ☐ Bulk Liquid ☐ Bulk Sludge ☒ Bulk Solid ☐ Drum/Box ☐ Other
2. Supplemental Shipping Information: NONE

D. PHYSICAL CHARACTERISTICS OF WASTE (See Instructions) **(Omit for Type B)**

1. Color	2. Does the waste have a strong incidental odor?	3. Physical State @ 70 F/21°C:	4. Layers	5. Specific Gravity	6. Free Liquids:
Brown	☒ No ☐ Yes: If so, describe:	☒ Solid ☐ Semi-Solid ☐ Liquid ☐ Powder ☐ Other:	☐ Multi-layered ☐ Bi-layered ☒ Single Phased	Range 1.7 - 2.1	☐ Yes ☒ No Volume:

7. pH: ☐ <2 ☐ > 2-4 ☐ 4-7 ☐ 7 ☒ 7-10 ☐ 10- <12.5 ☐ ≥12.5 ☐ Range ☐ NA

8. Flash Point: ☐ None ☐ <140°F/60°C ☐ 140 - 199°F/60 - 93°C ☒ ≥200°F/93°C ☐ Closed Cup ☐ Open Cup

E. CHEMICAL COMPOSITION **(Omit for Type B)**

	RANGE (MIN-MAX)
1. Soil	99.9998 %
Tetrachloroethene	0.00003 %
Trichloroethene	0.000018 %
Metals	0.00015 %
	- %
	- %
	- %
	- %
	- %
Total:	100.0 %

2. Does the waste contain any of the following? (provide concentration if known):

	NO	or	LESS THAN	or	ACTUAL
PCBs	☐		☐ < 50 ppm		UNK ppm
Cyanides	☐		☒ < 50 ppm		ppm
Sulfides	☐		☒ < 50 ppm		ppm
Phenols	☐		☐ < 50 ppm		UNK ppm

The total composition must be greater than or equal to 100%. (.0001% = 1 ppm or 1 mg/l)

SAMPLING SOURCE (Omit for Type B) ... Split Spoon from Soil Boring

REPRESENTATIVE SAMPLE CERTIFICATION (Omit for Type B)

Sampler's Name: Jeff Gahan   Sample Date: April 29, 1993

Sampler's Title: Engineering Technician

Sampler's Employer (if other than Generator): STS Consultant's Ltd. 11425 West Lake Park Drive Milwaukee, WI.

... equivalent rules.

Sampler's Signature [signature]

GENERATOR CERTIFICATION

By signing this profile sheet, the Generator certifies:

1. This waste is not "Hazardous Waste" as defined by USEPA and/or state regulation.
2. This waste does not contain regulated radioactive materials or regulated concentrations of PCB's (Polychlorinated Biphenyls).
3. This waste does not contain regulated concentrations of the following pesticides and herbicides: Chlordane, Endrin, Heptachlor (and it's epoxide), Lindane, Methoxychlor, Toxaphene, 2, 4-D, or 2, 4, 5-TP Silvex).
4. The waste does not contain halogenated compounds such as tetrachloroethylene, trichloroethylene, methylene chloride, ... trichloroethane, carbon tetrachloride, chloroform, ortho-dichlorobenzene, dichlorodifluoromethane, 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, trichlorofluoromethane, 1, 1-dichloroethylene, and 1, 2-dichloroethylene at greater than 1% (10,000ppm) total solvent concentration. This listing includes any combination of the above named halogenated compounds where the total concentration of the sum of the concentrations of the individual compounds exceed 1% or 10,000 ppm on a weight to weight basis.
5. This sheet and the attachments contain true and accurate descriptions of the waste material, and relevant information ... within the possession of the Generator has been disclosed.
6. The Generator has read and understands the Definition of Special Waste included in ... of the attached instructions ... has been identified ... on this form.
7. The analytical data presented herein or attached hereto were derived from testing a representative sample taken in accordance with 40 CFR 261.20(c) or equivalent rules.
8. If any changes occur in the character of the waste, the Generator shall notify the Contractor prior to ... the waste to the Contrac

9. Signature [signature]   10. Title GEOLOGIST

11. Name (Type or Print) ANN E. THOMA   12. Date 7/19/93

NOTE: Omit sections D., E., F., and G., for Type B waste.

Comments:

APPENDIX C

SITE PLAN SHOWING CONTAMINATED SOIL REMOVAL AREAS

WEST WELLS STREET

~118'

SIDEWALK

2101-2105

2115
W. WELLS
STREET

EXISTING
BUILDING
NOT TO BE
RAISED

4'

SOIL SAMPLES COLLECTED
ON AUGUST 25, 1993

S-5, S-6, S-7, S-8, S-13,
S-15 AND S-16

SOIL SAMPLES COLLECTED
ON OCTOBER 5, 1993

TP-4, TP-5 AND TP-6

2101-2113 WEST WELLS ST. COMPLEX

LIMIT OF CONTAMINATED
SOIL REMOVAL

S-6

S-5

S-7

TP-4

S-13

TP-5

S-8

S-15

S-16

TP-6

SOIL SAMPLES S-7, S-13,
S-15 AND S-16 HAD
DETECTS FOR PCE

~51'

NORTH 21ST STREET

SIDEWALK
(REMOVED)

RETAINING WALL
(REMOVED)

SCALE IN FEET

10 5 0 10

N

LEGEND

S-6	SOIL SAMPLE LOCATION
TP-6	SOIL SAMPLE LOCATION
	WATER LATERAL
	SEWER LATERAL
	GAS LATERAL
	APPROXIMATE LIMITS OF CONTAMINATED SOILS

REVISION	BY	DATE

AUTOCAD FILE 84161002

DRAWN BY J.M.I.

DATE 6/21/93

CHK. BY MEM/TGR

APPROVED BY T.W.W.

DOCUMENTATION OF
CONTAMINATED SOIL REMOVAL
2101-2113 WEST WELLS STREET
MILWAUKEE, WISCONSIN

STS Consultants, Ltd.
Consulting Engineers

STS PROJECT NUMBER 84161XF

STS PROJECT FILE

SCALE 1"=10'

FIGURE NUMBER 1

APPENDIX D

LABORATORY ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED ON AUGUST 25, 1993

PRECISION ANALYTICAL LABORATORY

205 WEST GALENA
MILWAUKEE, WI 53212
(414) 272-5222

08/30/93

Analytical Report

Attn: Tom Ryan
Client: STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

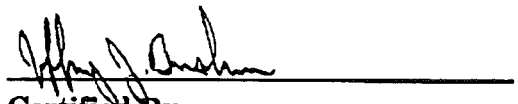
WORK ID: 84161XF

Date Received: 08/25/93
Date Reported: 08/30/93

PAL ORDER #: 9308382

SAMPLE DESCRIPTION	LAB ID	DATE COLLECTED
S-5	01B	08/25/93
S-6	02B	08/25/93
S-7	03B	08/25/93
S-8	04B	08/25/93
S-13	05B	08/25/93
S-15	06B	08/25/93
S-16	07B	08/25/93

Laboratory ID Number (Wisconsin DNR): 241369260



Certified By
Jeff Bushner

PRECISION ANALYTICAL LABORATORY

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW8
Sample ID: S-5			Lab ID:	9308382-01B		Collected: 08/25/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.1	ug/kg	08/26/93		JAH	
Trichloroethene	BQL	1.1	ug/kg	08/26/93		JAH	
Dry Weight	89		%	08/26/93		JAH	
GC/MS Confirm for VOA/GC	-		-	08/26/93		JAH	8240
Single Compound	-		-	08/26/93		JAH	
Sample ID: S-6			Lab ID:	9308382-02B		Collected: 08/25/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.1	ug/kg	08/26/93		JAH	
Trichloroethene	BQL	1.1	ug/kg	08/26/93		JAH	
Dry Weight	88		%	08/26/93		JAH	
GC/MS Confirm for VOA/GC	-			08/26/93		JAH	8240
Single Compound	-		-	08/26/93		JAH	
Sample ID: S-7			Lab ID:	9308382-03B		Collected: 08/25/93	
8021 - Soil							8021
Tetrachloroethene	E 18000	290	OC ug/kg	08/27/93		JAH	
Trichloroethene	BQL	290	OC ug/kg	08/27/93		JAH	
Dry Weight	88		%	08/26/93		JAH	
GC/MS Confirm for VOA/GC	YES		-	08/27/93		LJS	8240
Single Compound	-		-	08/27/93		JAH	
Sample ID: S-8			Lab ID:	9308382-04B		Collected: 08/25/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.2	ug/kg	08/27/93		JAH	
Trichloroethene	BQL	1.2	ug/kg	08/27/93		JAH	
Dry Weight	87		%	08/26/93		JAH	
GC/MS Confirm for VOA/GC	-		-	08/27/93		JAH	8240
Single Compound	-		-	08/27/93		JAH	
Sample ID: S-13			Lab ID:	9308382-05B		Collected: 08/25/93	
8021 - Soil							8021
Tetrachloroethene	1200	140	OC ug/kg	08/27/93		JAH	
Trichloroethene	BQL	140	OC ug/kg	08/27/93		JAH	
Dry Weight	89		%	08/26/93		JAH	

BQL - Below Quantification Limit NP - Not Present

PRECISION ANALYTICAL LABORATORY

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method(SW8
GC/MS Confirm for VOA/GC	YES	-		08/27/93		LJS	8240
Single Compound	-	-		08/27/93		JAH	
Sample ID: S-15		Lab ID:	9308382-06B			Collected: 08/25/93	
8021 - Soil							8021
Tetrachloroethene	25	1.1	ug/kg	08/29/93		JAH	
Trichloroethene	BQL	1.1	ug/kg	08/29/93		JAH	
Dry Weight	89		%	08/26/93		JAH	
GC/MS Confirm for VOA/GC	YES	-		08/27/93		LJS	8240
Single Compound	-	-		08/29/93		JAH	
Sample ID: S-16		Lab ID:	9308382-07B			Collected: 08/25/93	
8021 - Soil							8021
Tetrachloroethene	3300	140	OC ug/kg	08/27/93		JAH	
Trichloroethene	BQL	140	OC ug/kg	08/27/93		JAH	
Dry Weight	88		%	08/26/93		JAH	
GC/MS Confirm for VOA/GC	YES	-		08/27/93		LJS	8240
Single Compound	-	-		08/27/93		JAH	

BQL - Below Quantification Limit NP - Not Present

PRECISION ANALYTICAL LABORATORY

Report Comments

08/30/93

CLIENT: STS Consultants

PAL Order #: 9308382

All analysis as per approved method found in one or more of the following:
Standard Methods for Evaluation of Water and Wastewater, 17th Edition
Methods for Chemical Analysis for Water and Wastes, Revised March 1983, EPA 600/4-79-020
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition 1986 EPA SW846

Analysis performed or certified by Precision Analytical Laboratory

The organic data is reported out on a dry-weight basis.

Sample was covered air tight in approved container, shipped in cooler from the source to our lab, temperature upon arrival was 4 degrees C.

OC Elevated detection limit due to sample concentration.

E - Estimated concentration, analyte was above the calibration range.

APPENDIX E

LABORATORY ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED ON OCTOBER 5, 1993

PRECISION ANALYTICAL LABORATORY
205 WEST GALENA
MILWAUKEE, WI 53212
(414) 272-5222

10/14/93
17:08 **RE**

Analytical Report

Attn: Tom Kroeger
Client: STS Consultants
11425 West Lake Park Drive
Milwaukee, WI 53224

WORK ID: 2111 Wells St.

Date Received: 10/05/93
Date Reported: 10/06/93

PAL ORDER #: 9310074

SAMPLE DESCRIPTION	LAB ID	DATE COLLECTED
TP-4 S-1	01A	10/05/93
TP-4 S-1	01B	10/05/93
TP-5 S-1	02A	10/05/93
TP-5 S-1	02B	10/05/93
TP-6 S-1	03A	10/05/93
TP-6 S-1	03B	10/05/93

Laboratory ID Number (Wisconsin DNR): 241369260

Certified By
Jeff Bushner

PRECISION ANALYTICAL LABORATORY

CLIENT:**STS Consultants**

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method
Sample ID: TP-4 S-1			Lab ID:	9310074-01A		Collected: 10/05/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.4	ug/kg	10/05/93		JAH	
GC/MS Confirm for VOA/GC	NO		-	10/05/93		JAH	Mass Conf.
Single Compound	-		-	10/05/93		JAH	
Sample ID: TP-4 S-1			Lab ID:	9310074-01B		Collected: 10/05/93	
Dry Weight - Organic	88		%	10/05/93		JAH	
Sample ID: TP-5 S-1			Lab ID:	9310074-02A		Collected: 10/05/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.4	ug/kg	10/05/93		JAH	
GC/MS Confirm for VOA/GC	NO		-	10/05/93		JAH	Mass Conf.
Single Compound	-		-	10/05/93		JAH	
Sample ID: TP-5 S-1			Lab ID:	9310074-02B		Collected: 10/05/93	
Dry Weight - Organic	89		%	10/05/93		JAH	
Sample ID: TP-6 S-1			Lab ID:	9310074-03A		Collected: 10/05/93	
8021 - Soil							8021
Tetrachloroethene	BQL	1.3	ug/kg	10/05/93		JAH	
GC/MS Confirm for VOA/GC	NO		-	10/05/93		JAH	Mass Conf.
Single Compound	-		-	10/05/93		JAH	
Sample ID: TP-6 S-1			Lab ID:	9310074-03B		Collected: 10/05/93	
Dry Weight - Organic	88		%	10/05/93		JAH	

BQL - Below Quantification Limit NP - Not Present

PRECISION ANALYTICAL LABORATORY

Report Comments

10/14/93

CLIENT: STS Consultants

PAL Order #: 9310074

All analysis as per approved method found in one or more of the following:
Standard Methods for Evaluation of Water and Wastewater, 17th Edition
Methods for Chemical Analysis for Water and Wastes, Revised March 1983, EPA 600/4-79-020
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition 1986 EPA SW846

Analysis performed or certified by Precision Analytical Laboratory

The organic data is reported out on a dry-weight basis.

Sample was covered air tight in approved container, shipped in cooler from the source to our lab, temperature upon arrival was 4 degrees C.

APPENDIX F

PERMIT APPLICATION AND PERMIT ISSUED BY THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT FOR DISCHARGE OF WATER FROM THE EXCAVATION AREA

Milwaukee Metropolitan Sewerage District

LEAVE BLANK - FOR MMSD USE ONLY	
MMSD I.D.	
DATE RECEIVED	

This form must be completed by all Users identified in subsec. 11.02(12), MMSD Rules, prior to commencing discharge into the District sewerage system.

NOTICE OF INTENT TO DISCHARGE INDUSTRIAL WASTEWATER

SECTION I - To Be Completed By User

1. COMPANY NAME: Ms. Ann Thoma

2. DIVISION NAME: (If applicable)

3. FACILITY ADDRESS: a. STREET ADDRESS 2101-13 West Wells Street
   b. CITY, STATE, AND ZIP CODE Milwaukee, Wisconsin 53233

4. MAILING ADDRESS: c/o Grunau Project Development
   a. STREET OR P.O. BOX 111 West Pleasant Street Suite 101
   b. CITY, STATE, AND ZIP CODE Milwaukee, Wisconsin 53212

5. BRIEF DESCRIPTION OF BUSINESS: Small retail center including a tavern and a dry-cleaning establishment.

6. NAME, TITLE, AND TELEPHONE NUMBER OF INDUSTRY REPRESENTATIVE:
   a. NAME Mr. Jeff Brown
   b. TITLE Project Manager
   c. TELEPHONE NUMBER 414-272-0411

7. DATE WHEN DISCHARGE IS EXPECTED TO BEGIN: October 4, 1993

8. FOUR-DIGIT SIC (STANDARD INDUSTRIAL CLASSIFICATION) CODE FOR FACILITY: Dry-cleaning 7216 Tavern 5813

9. REASON FOR FILING NOTICE OF INTENT:
   a. ___ PURCHASE OF AN EXISTING FACILITY.
   b. XX CONSTRUCTION OF A NEW FACILITY.
   c. ___ PROPOSING TO DISCHARGE FROM A FACILITY WHERE THERE IS CURRENTLY NO DISCHARGE.
   d. ___ SIGNIFICANTLY ALTERING THE VOLUME OR CHARACTERISTICS OF AN EXISTING DISCHARGE.

10. VOLUME OF:

	Existing Discharge		Proposed Discharge
	none	GAL/DAY PROCESS WASTEWATER	35,000 (1 time discharge)
		GAL/DAY DOMESTIC WASTEWATER	
		GAL/DAY COOLING WATER	

11. DESCRIBE PROCESS(ES) THAT WILL RESULT IN THE DISCHARGE OF AN INDUSTRIAL PROCESS WASTEWATER:
Precipitation runoff collected in excavation area during demolition of the building. Runoff contacted soils impacted with tetrachloroethylene.

12. LIST ALL CHEMICALS/POLLUTANTS THAT MIGHT BE PRESENT IN YOUR PROPOSED DISCHARGE:
Tetrachloroethylene.

13. DESCRIBE ANY WASTEWATER PRETREATMENT METHODS AND FACILITIES TO BE USED: none

14. I AM FAMILIAR WITH THE DISCHARGE STANDARDS, MONITORING AND REPORTING REQUIREMENTS, AND OTHER PROVISIONS OF CHAPTER 11 OF THE DISTRICT RULES AND REGULATIONS:

Hermine C. Ryan — Signature

9/30/93 — Date

Senior Project Engineer — Title

STS Consultants, Ltd.
11425 West Lake Park Drive
Milwaukee, Wisconsin 53224 414-359-3030

SECTION II - To Be Completed By MMSD

APPROVAL TO COMMENCE PROPOSED DISCHARGE IS HEREBY

___ GRANTED

___ GRANTED, SUBJECT TO ATTACHED SPECIAL CONDITIONS.

___ REJECTED, FOR REASONS AS SPECIFIED IN THE ATTACHED.

Signature Date

Milwaukee Metropolitan Sewerage District
260 West Seeboth Street
P.O. Box 3049
Milwaukee, Wisconsin 53201-3049
(414) 272-5100

October 1, 1993

Mr. Jeff Brown
c/o Grunau Project Development
111 W. Pleasant St., Suite 101
Milwaukee, WI 53212

Re: Notice of Intent 93.068

Dear Mr. Brown:

The Milwaukee Metropolitan Sewerage District reviewed the Notice of Intent submitted by STS Consultants for the one-time discharge of wastewater from 2103-13 West Wells Street, Milwaukee. This notice was received by the District on September 30, 1993. The discharges proposed in the notice of intent are hereby approved subject to the following conditions:

1. That the limitations be in compliance with the general and specific limitations contained in Chapter 11, MMSD Rules and Regulations.

2. That discharge occurs during the month of October, 1993.

3. If, after discharge occurs, it becomes necessary to discharge again, another Notice of Intent, along with the appropriate sampling and analysis will need to be submitted.

Please direct any questions or correspondence to Harvey Matyas at 225-2164.

Very truly yours,

Bernadette D. Berdes, P.E.
Manager of Field Operations and Regulatory Compliance

cc: NOI File, City of Milwaukee, DNR, Tom Ryan/STS Consultants
HJM:sb/243a

APPENDIX G

PROCTOR TEST AND COMPACTION RESULTS FOR BACKFILL OF THE BASEMENT INTERIOR

MOISTURE-DENSITY RELATION OF SOILS
MODIFIED PROCTOR ASTM D 1557-91
DATE: 10-12-93 METHOD C

STS JOB NO.: 84161XF
PROJECT: 2101-13 W. WELLS

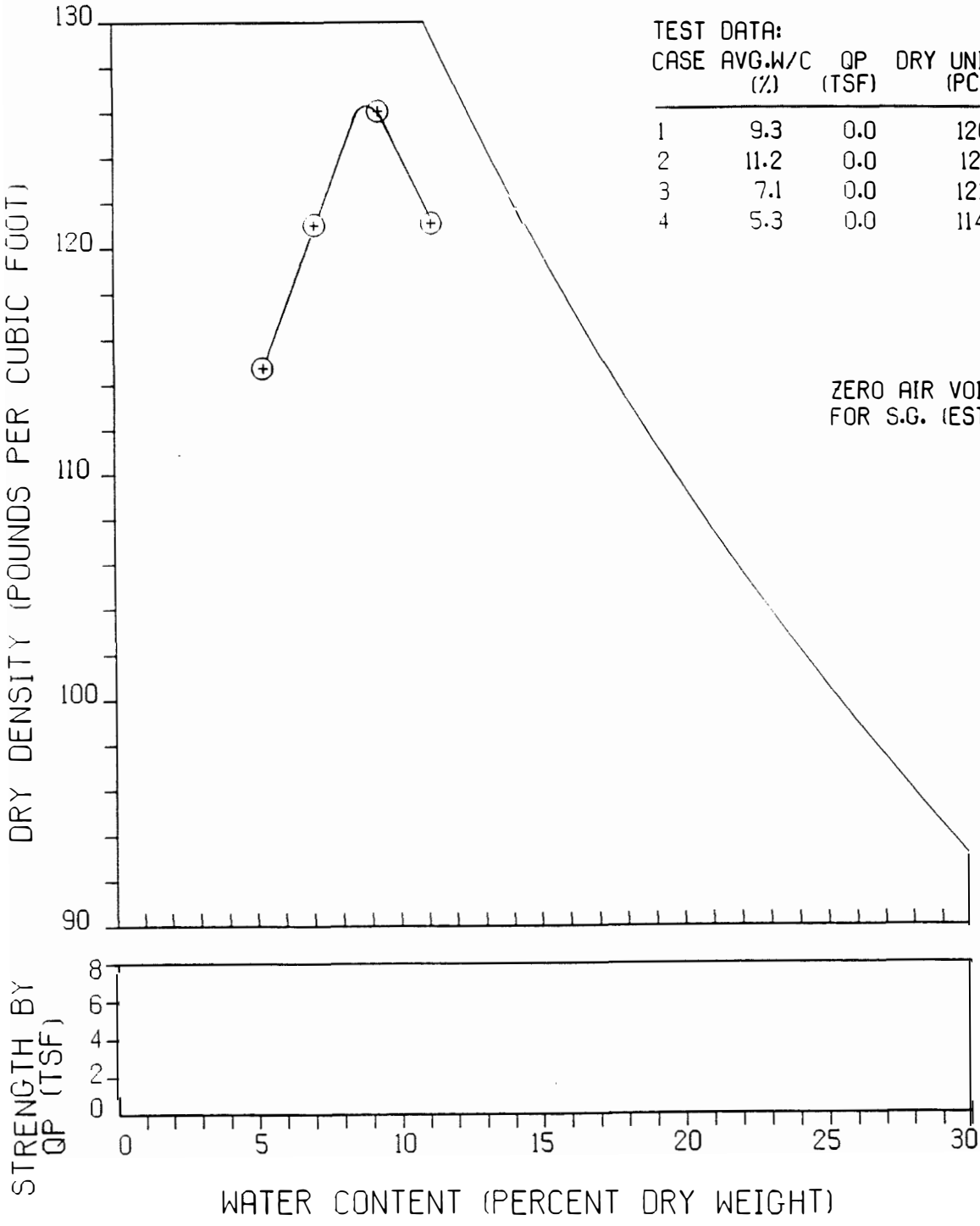
SAMPLE NO.: 10-7-#1
SOIL TYPE: CRUSHED CONCRETE

MAXIMUM DRY DENSITY(PCF):	126.6
OPTIMUM WATER CONTENT(%):	8.0
WATER CONTENT AS REC'D(%):	--

TEST DATA:

CASE	AVG.W/C (%)	QP (TSF)	DRY UNIT WEIGHT (PCF)
1	9.3	0.0	126.1
2	11.2	0.0	121.1
3	7.1	0.0	121.0
4	5.3	0.0	114.7

ZERO AIR VOID CURVE
FOR S.G. (EST.) = 2.70



STS Construction Technology Group
Field Report

NOTE: The responsibilities and authority of STS and STS' Field Personnel include neither the responsibilities nor the authority of the "Competent Person" for t Project Site as defined by OSHA Regulations: 29 CFR 1926 Subpart P.

Project No. 84161XF

Project 2101-13 W. Wells St

Day/Date Thurs 10/7/93

Location Milwaukee

Weather/Temp. Clear/60°

Contractor Ganow

Client

Project Competent Person per 29 CFR Pa t 1926 (Subpart P)

NAME: N. A.

FIRM:

FIRM ADDRESS:

PHONE:

Present on Site ☐ YES ☐ NO

Equipment Rental

Tolls $

Parking $

Mileage 28

Arrive Job 9:15

Depart Job 10:00

Total Hours on Job 0.75

Travel Time 1.0

Project Preparation Time 0.5 Equip & Reports

TOTAL CHARGEABLE HOURS
4 HOUR MINIMUM

~~2.25~~

2.25

Summary of Technical and/or Engineering Services Performed, including Field Test Data, Locations, Elevations and Depth are Estimated.

Arrived on-site to perform compaction tests (spot check) on crushed concrete (Est. proctor 128.0 lbs/ft³). Was informed by contractor that he would finish placing & compacting the 1st Lift @ 2-3:00 PM.

Collected a sample of the fill material (crushed concrete) for laboratory testing (Modified proctor).

☐ Field Test Data is Estimated Pending Final Laboratory Test Results.

Site Sketch: Indicate North

Field Representative

Position

Company

By Jeffrey Hahn

Title Engineering Tech.

STS Consultants, Ltd.

2 WHITE – Office YELLOW – Time Card WHITE – Field

8/92PP1

STS Construction Technology Group
Field Report

NOTE: The responsibilities and authority of STS and STS' Field Personnel include neither the responsibilities nor the authority of the "Competent Person" for Project Site as defined by OSHA Regulations: 29 CFR 1926 Subpart P.

Project No. 24161XF

Project 2100 S WELLS

Day/Date THURS / 10-7-93

Location MILW. WI

Weather/Temp. SUNNY / 70s

Contractor GAHNS

Client

Project Competent Person per 29 CFR Part 1926 (Subpart P)

NAME:

FIRM: NA

FIRM ADDRESS:

PHONE:

Present on Site ☐ YES ☐ NO

Equipment Rental NUKE

Tolls $ —

Parking $ —

Mileage 24

Arrive Job 2:15

Depart Job 4:30

Total Hours on Job 1.25

Travel Time 1.0

Project Preparation Time 0.50

TOTAL CHARGEABLE HOURS
4 HOUR MINIMUM

2.75

Summary of Technical and/or Engineering Services Performed. including Field Test Data. Locations, Elevations and Depth are Estimated.

DENSITIES TESTED BACKFILL MATERIAL FOR REMOVE BLDG'S BASEMENT. BACKFILL MATE. CONSISTED OF 1" CRUSHED CONCRETE. USING AN ESTIMATED PROCTOR # OF 128.1, COMPACT RANGE BETWEEN 94.0 TO 97% COMPACTION (95% REQ). TESTED 1 LIFT THAT WAS PLACED APPX 1'-6", THE LIFT WAS APPX 6' BELOW FINISH GRADE. INFORMED CONTRACTOR THAT THEY SHOULD PLACE THE MATERIAL IN 1' LIFT TO GET BETT. COMPACTION

ACTUAL FIELD DENSITY TEST RESULTS RANGED FROM 95% TO 98% COMPACT. BASED ON THE ACTUAL MODIFIED PROCTOR TEST (126.6 PCF). MRM

☐ Field Test Data is Estimated Pending Final Laboratory Test Results.

Site Sketch: Indicate North

Field Representative Dick [signature]

Position

Company

By Paul [signature]

Title Lab Tech

STS Consultants, Ltd.

2 WHITE – Office YELLOW – Time Card WHITE – Field

8/92PF

STS Consultants Ltd.
Consulting Engineers

FIELD COMPACTION SUMMARY

STS JOB NO. 2416IXF
PAGE 1 OF 1

JOB NAME AND LOCATION 2101-13 WEST WELLS ST.
ARCHITECT OR ENGINEER STS CONSULTANTS LTD
CONTRACTOR GANOS CONSTRUCTION

METHOD OF FIELD DENSITY MEASUREMENT ☐ SAND CONE METHOD ☒ NUCLEAR METHOD ☐ _____ DATUM SITE

TEST NO.	DATE	LOCATION	LIFT NO. OR ELEV.	MTL. MARK	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN-PLACE DRY DENSITY	PERCENT COMPACTION	COMMENTS
	10-7-92	BASEMENT AREA	-6.0' BELOW FINISH GRADE	10-7#1	126.6	8.9	120.0	95	
2	"	"	"	"	"	9.2	120.1	95	
3	"	"	"	"	"	9.4	124.3	98	
4	"	"	"	"	"	9.2	123.7	98	
5	"	"	"	"	"	9.2	123.3	97	

NOTES: DENSITIES SHOWN: LBS. PER CUBIC FOOT
WATER CONTENT: PERCENT OF DRY WEIGHT
ELEVATIONS AND LOCATIONS: ESTIMATED

PERCENT COMPACTION: BASED ON MAXIMUM DRY DENSITY OBTAINED ON A SAMPLE INDICATED BY MATERIAL MARK [ESTIMATED. SEE ATTACHED LABORATORY COMPACTION REPORT.

STS Construction Technology Group
Field Report

NOTE: The responsibilities and authority of STS and STS' Field Personnel include neither the responsibilities nor the authority of the "Competent Person" for Project Site as defined by OSHA Regulations: 29 CFR 1926 Subpart P.

Project No. 39161XF

Project 2100 ST - WELLS

Day/Date FRI 10-8-93

Location MILW. WI

Weather/Temp. CLOUDY /60'S

Contractor [illegible]

Client

Project Competent Person per 29 CFR Part 1926 (Subpart P)

NAME:

FIRM:

FIRM ADDRESS: N/A

PHONE:

Present on Site ☐ YES ☐ NO

Equipment Rental NUKE

Arrive Job 9:30

Tolls $ —

Depart Job 11:15

Parking $ —

Total Hours on Job 1.75

Mileage 24

Travel Time 0.50

Project Preparation Time 0.50

TOTAL CHARGEABLE HOURS
4 HOUR MINIMUM

2.75

Summary of Technical and/or Engineering Services Performed, including Field Test Data. Locations, Elevations and Depth are Estimated.

OBSERVED & TESTED BACKFILL MATERIAL FOR REMOVED BLDG'S BASEMENT. BACKFILL MATERIAL CONSISTED OF 1" CRUSHED CONCRETE. USING A ESTIMATED PROCTOR @ 128.1. COMPACTOR RAN BETWEEN 95% TO 97% COMPACTION (95% REQ) TEST ELEV WAS APPX 5' BELOW FINISH GRADE.

CONTRACTOR WAS INFORMED OF RESULT

ACTUAL FIELD DENSITY TEST RESULTS RANGED FROM 95% TO 98% COMPACTION BASED ON THE MODIFIED PROCTOR OF 126.6 PCF.

MKM

* ☐ Field Test Data is Estimated Pending Final Laboratory Test Results.

Site Sketch: Indicate North

Field Representative Dick Patenaude

Position

Company

By

Title Eng Tech

STS Consultants, Ltd.

2 WHITE – Office YELLOW – Time Card WHITE – Field

8/92PP

STS Consultants Ltd.
Consulting Engineers

FIELD COMPACTION SUMMARY

STS JOB NO. S4161XF
PAGE 1 OF 1

JOB NAME AND LOCATION 2101-13 W. WEST CT.
ARCHITECT OR ENGINEER STS CONSULTANTS LTD
CONTRACTOR GANES CONSTRUCTION

METHOD OF FIELD DENSITY MEASUREMENT ☐ SAND CONE METHOD ☒ NUCLEAR METHOD ☐ _____ DATUM SITE

TEST NO.	DATE	LOCATION	LIFT NO. OR ELEV.	MTL. MARK	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN-PLACE DRY DENSITY	PERCENT COMPACTION	COMMENTS
1	10-8-94	BASEMENT AREA	-5.0' BELOW FINISH GRADE	10-7-#1	126.6	10.6	123.0	97	
2	"	"	"	"	"	9.7	120.2	95	
3	"	"	"	"	"	10.1	123.4	98	

NOTES: DENSITIES SHOWN: LBS. PER CUBIC FOOT
WATER CONTENT: PERCENT OF DRY WEIGHT
ELEVATIONS AND LOCATIONS: ESTIMATED

PERCENT COMPACTION: BASED ON MAXIMUM DRY DENSITY OBTAINED ON A SAMPLE INDICATED BY MATERIAL MARK ESTIMATED. SEE ATTACHED LABORATORY COMPACTION REPORT.

STS Construction Technology Group
Field Report

NOTE: The responsibilities and authority of STS and STS' Field Personnel include neither the responsibilities nor the authority of the "Competent Person" fo: Project Site as defined by OSHA Regulations: 29 CFR 1926 Subpart P.

Project No. 84161XF

Project 2100th ST & WELLS

Day/Date FRI 10-8-93

Location MILW, WI

Weather/Temp. CLOUDY / 70°

Contractor JANOS

Client

Project Competent Person per 29 CFR Part 1926 (Subpart P)

NAME:

FIRM:

FIRM ADDRESS: N/A

PHONE:

Present on Site ☐ YES ☐ NO

Equipment Rental NUKE

Arrive Job 2:00

Tolls $ —

Depart Job 2:30

Parking $ —

Total Hours on Job 0.50

Mileage 24

Travel Time 1.0

Project Preparation Time 0.25

TOTAL CHARGEABLE HOURS
4 HOUR MINIMUM

1.75

Summary of Technical and/or Engineering Services Performed, including Field Test Data. Locations, Elevations and Depth are Estimated.

OBSERVED & TESTED BACKFILL MATERIAL FOR REMOVED BLDG'S BASEMENT. BACKFILL MATERIAL CONSISTED OF A CRUSHED CONCRETE. USING A ESTIMATED PROCTOR OF 128.1. COMPACTION RANGE BETWEEN 95 TO 102% COMPACTION (95%) TEST ELEV WAS APPX 3' BELOW FINISH GRADE. FILL WAS PLACE IN APPX 1' LIFTS THAN COMPACTED WITH HYSTER 10 TON ROLLER

CONTRACTOR WAS INFORMED OF THE RESULTS

ACTUAL FIELD DENSITY TEST RESULTS RANGED FROM 97% TO 99% COMPACTION BASED ON THE ACTUAL MODIFIED PROCTOR VALUE (126.6 PCF).
MFSM

* ☑ Field Test Data is Estimated Pending Final Laboratory Test Results.

Site Sketch: Indicate North

Field Representative Dick [signature]

Position

Company

By [signature]

Title [signature]

STS Consultants, Ltd.

2 WHITE – Office YELLOW – Time Card WHITE – Field

8/92PI

STS Consultants Ltd.
Consulting Engineers

FIELD COMPACTION SUMMARY

STS JOB NO. 34161XF
PAGE 1 OF 1

JOB NAME AND LOCATION 2101-13 W. WELLS ST.
ARCHITECT OR ENGINEER STS CONSULTANTS, LTD.
CONTRACTOR GANOS CONSTRUCTION

METHOD OF FIELD DENSITY MEASUREMENT ☐ SAND CONE METHOD DATUM SITE
☒ NUCLEAR METHOD
☐ _____

TEST NO.	DATE	LOCATION	LIFT NO. OR ELEV.	MTL. MARK	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN-PLACE DRY DENSITY	PERCENT COMPACTION	COMMENTS
1	10-9-	BASEMENT AREA	-3.0' BELOW FINISH GRADE	10-7-71	126.6	12.7	123.1	97	
2	"	"	"	"	"	9.2	122.9	97	
3	"	"	"	"	"	10.3	123.3	97	
4	"	"	"	"	"	10.0	125.2	99	

NOTES: DENSITIES SHOWN: LBS. PER CUBIC FOOT
WATER CONTENT: PERCENT OF DRY WEIGHT
ELEVATIONS AND LOCATIONS: ESTIMATED

PERCENT COMPACTION: BASED ON MAXIMUM DRY DENSITY OBTAINED ON A SAMPLE INDICATED BY MATERIAL MARK ESTIMATED. SEE ATTACHED LABORATORY COMPACTION REPORT.

STS Construction Technology Group
Field Report

NOTE: The responsibilities and authority of STS and STS' Field Personnel include neither the responsibilities nor the authority of the "Competent Person" for t Project Site as defined by OSHA Regulations: 29 CFR 1926 Subpart P.

Project No. 84161XF

Project 2101-2113 WEST WELLS ST. Day/Date THR 10-28-93

Location MILW, WI Weather/Temp. CLOUDY - 40

Contractor _____ Client _____

Project Competent Person per 29 CFR Part 1926 (Subpart P)

NAME: _____

FIRM: N/A

FIRM ADDRESS: _____

PHONE: _____

Present on Site ☐ YES ☐ NO

Equipment Rental 2531 NUKE

Tolls $ _____

Parking $ _____

Mileage 32

Arrive Job 11:15 AM

Depart Job 11:45 AM

Total Hours on Job 1.50

Travel Time 1.00

Project Preparation Time 0.50

TOTAL CHARGEABLE HOURS
4 HOUR MINIMUM

2.00

Summary of Technical and/or Engineering Services Performed, including Field Test Data. Locations, Elevations and Depth are Estimated.

PERFORMED COMPACTION TESTING ON IN PLACE CRUSHED CONCRETE MATERIA AS DIRECTED BY STS. TESTS WERE TAKEN @ THE FINAL LIFT AT DEPTHS OF 4" TO 6". IN PLACE DRY DENSITY RESULTS RANGED FROM 124.2 PCF TO 125.4 PCF WHICH MEETS THE 95% REQUIRED OF MODIFIED PROCTO VALUE OF 126.6 PCF / 8.0% OPTIMUM MOISTURE. REFER TO DATA SHEE FOR FURTHER INFO.

* ☐ Field Test Data is Estimated Pending Final Laboratory Test Results.

Site Sketch: Indicate North

Field Representative _____

Position _____ By DEAN DRIGGETT

Company _____ Title SR. ENGR. TECH.

STS Consultants, Ltd.

2 WHITE – Office YELLOW – Time Card WHITE – Field

STS Consultants Ltd.
Consulting Engineers

FIELD COMPACTION SUMMARY

STS JOB NO. B4161XF
PAGE 1 OF 1

JOB NAME AND LOCATION 2101-2113 WEST WELLS ST.
ARCHITECT OR ENGINEER
CONTRACTOR

METHOD OF FIELD DENSITY MEASUREMENT ☐ SAND CONE METHOD DATUM
☒ NUCLEAR METHOD
☐

TEST NO.	DATE	LOCATION	LIFT NO. OR ELEV.	MTL. MARK	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN-PLACE DRY DENSITY	PERCENT COMPACTION	COMMENTS
1	10-28	SEE	FINAL		126.6	6.9	124.3	98	
2	"	DIAG.	"		126.6	7.0	124.2	98	
3	↓		↓		126.6	6.4	125.4	99	

NOTES: DENSITIES SHOWN: LBS. PER CUBIC FOOT
WATER CONTENT: PERCENT OF DRY WEIGHT
ELEVATIONS AND LOCATIONS: ESTIMATED

PERCENT COMPACTION: BASED ON MAXIMUM DRY DENSITY OBTAINED ON A SAMPLE INDICATED BY MATERIAL MARK ESTIMATED. SEE ATTACHED LABORATORY COMPACTION REPORT.