S[illegible] Consultants, Ltd.
Transmittal Letter

GREEN BAY	SCHOFIELD	MILWAUKEE	OSHKOSH
Phone (920) 468-1978	Phone (715) 355-4304	Phone (414) 359-3030	Phone (920) 235-0270
Fax (920) 468-3312	Fax (715) 355-4513	Fax (414) 359-0822	Fax (920) 235-0321

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

Date: April 22, 1999
STS Job No.: 23379XA
Project: Carver Boat Corporation
Location: Polyester/Styrene Tank #3
Pulaski, WI

Attention: Ms. Kristin Nell

RECEIVED
APR 26 1999
LMD SOLID WASTE

We are sending:

☒ attached ☐ under separate cover via: _____

the following item(s):

☐ Prints	☐ Copy of Letter	☐ Samples
☐ Shop Drawings	☐ Change Order	☐ Test Results
☐ Specifications	☐ Boring Logs	☐ Draft Report # _____
☒ Other See Below	☐ Concrete Report # _____	

They are transmitted as indicated:

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

Remarks:

A temporary monitoring well abandonment form for Carver Boat Corporation Boring B-3-1 is attached to this transmittal. Documentation of the abandonment of this temporary monitoring well was requested in your letter dated March 16, 1999. We understand that this submittal will result in the WDNR's removing project 02-05-178563 from the "active" list.

Copy:
Mr. Ted Maloney
Carver Boat Corporation
P.O. Box 1010
Pulaski, WI 54162

William F. Noel

STS Representative: William F. Noel

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 3-94

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

(1) GENERAL INFORMATION 23379XA

Well/Drillhole/Borehole Location: B-3-1

County: Brown

NW 1/4 of NW 1/4 of Sec. 5 ; T. 25 N; R. 19 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name: Pulaski

Street Address of Well: 790 Markham Drive

City, Village: Pulaski

(2) FACILITY NAME Carver Boat Corporation Plant 1

Original Well Owner (If Known): Carver Boat Corp.

Present Well Owner: Same

Street or Route: 790 Markham Drive

City, State, Zip Code: Pulaski, Wisconsin 54162

Facility Well No. and/or Name (If Applicable): B-3-1

Unique Well No.:

Reason For Abandonment: Site Closure

Date of Abandonment: 04/01/99

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 07/17/98

Temporary
☒ Monitoring Well
☐ Water Well
☐ Drillhole
☐ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Depth (ft.) _____ (From groundsurface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) 4.4

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☒ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	

If No, Explain _____

Was Casing Cut Off Below Surface?	☒ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Material Used To Fill Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	10.4	1 bag	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: STS Consultants Ltd.

Signature of Person Doing Work: [signature]
Date Signed: 4-12-99

Street or Route: 1035 Kepler Drive
Telephone Number: 920-468-1978

City, State, Zip Code: Green Bay, WI 54311

djp23379

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected
District/County
Reviewer/Inspector
☐ Complying Work
☐ Noncomplying Work
Follow-up Necessary

DNR/COUNTY

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

Remediation and Redevelopment
1125 North Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5916
FAX 920-492-5859
TDD 920-492-5812

March 16, 1999

Carver Boat Corporation
Attn: Ted Maloney
P.O. Box 1010
Pulaski, WI 54162

SUBJECT: Closure Pending MW Abandonment
Carver Boats – Polyester/Styrene Tank #3, 790 Markham Pulaski, WI
WDNR ERP Case #: 02-05-178563

Dear Mr. Maloney:

On December 23, 1997, the Wisconsin Department of Natural Resources provided notice to you that the degree and extent of styrene and xylene contamination at the above-named site was required to be investigated and remediated

On March 9, 1999, the Northeast Region Closeout Committee completed a review of the above referenced styrene and xylene contamination case. The committee reviews environmental remediation cases for compliance with state laws, standards and guidelines to maintain consistency in the closeout of cases.

Based on the investigative and remedial documentation provided to the Department, it appears that the styrene and xylene contamination at the above mentioned site has been remediated to the extent practicable. The Department considers the above referenced case "closed," having determined that no further action is necessary at the site at this time. As a condition of this closure, the Department is requiring you to properly abandon all groundwater monitoring wells and provide the Department with the proper documentation of such abandonment. **This case will be listed as "active" on the Department's tracking system until the above mentioned condition is met.**

This case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety or welfare to the environment.

If you have any questions regarding the content of this letter, please contact me in Green Bay at (920) 492-5943.

Sincerely,

Kristin Nell
Hydrogeologist
Remediation & Redevelopment Program

cc: Bill Noel, STS Consultants Ltd.
1035 Kepler Drive, Green Bay, WI 54311

Resubmittal 02-25-99

10/8/ 3-1-99

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
CASE SUMMARY AND CLOSE OUT FORM

Form ____ - ___
Rev. 11/97

FOR DEPARTMENT USE ONLY

Type of Case: LUST Spill (ER) Act 453 Other_____ DNR Reviewer: New CHRONERT

WDNR Site Name: Carver Boat Corporation Polyester/Styrene Contamination (Former Carver UST #3)

Complete Site Address: 790 Markham Drive, Pulaski, Wisconsin 54162

WDNR BRRTS Case #: 0 2 - 0 5 - 1 7 8 5 6 3 PECFA Claim #: _____ - _____ -

Responsible Party Name: Carver Boat Corporation

Complete Responsible Party Address: 790 Markham Drive, Pulaski, Wisconsin 54162

Site Legal Description: ___ 1/4, NW 1/4, NW 1/4, Sec 5, T 25 N, R 19 (E/W) Town: Pulaski

County: Brown Latitude: 44 ° 40 ' ___ ___ . ___ " Longitude: 88 ° 13 ' 30 "

Type Of Closure Requested:

Soil		Groundwater	
X	<NR 720.09/720.11 Generic RCLs	_____	<NR 140.10 Table 1 & Table 2 Values
_____	NR 720.19(2) Soil Performance Stds.	X	NR 140.28(2) PAL Exemption
X	NR 720.19(3) Site Specific Stds.	_____	NR 726.05(2)(b) Natural Attenuation

Contaminant Type(s): Styrene and Xylenes Quantity Released: Unknown

Date of Incident/Discovery: September 26, 1997 Date Closure Submitted to DNR: 10/9/98

Enforcement Actions Closed Out? ____ Yes ____ No X NA Permits Closed Out? _____ Yes _____ No X NA

Form 4 Pending? _____ Yes X No _____ NA

I certify that, to the best of my knowledge, the information presented on and attached to this form are true and accurate. This recommendation for case closure is based upon all available data as of 10/9/98 (date). I have read the Case Summary and Close Out Form Instructions and all required information has been included.

Form completed by: William F. Noel 10/9/98

(Signature) MB (Date)

Printed Name: William F. Noel Firm Name: STS Consultants, Ltd.

Relationship to Site Owner: Consultant

Address: 1035 Kepler Drive, Green Bay, Wisconsin 54311

Telephone Number: 920-468-1978 FAX Number: 920-468-3312

Environmental Consultant (if different then above): _____

Address: _____

Telephone Number: _____ FAX Number: _____

WDNR BRRTS Case #: 02-05-178563 WDNR Site Name: Carver Boat Corp. Polyester/Styrene Contamination (Carver UST #3)

1. CASE HISTORY AND JUSTIFICATION FOR CLOSURE ATTACHED? X Yes _____ No

2. SOIL PRE-REMEDIATION OR INVESTIGATION ANALYTICAL RESULTS

Extent Defined? X Yes ____ No Soil Type(s): Sandy silt, silty sand, silty clay Depth to Bedrock: Not encountered.

Potential Receptors for Direct Contact (i.e. vapor migration, contaminated soil left in place): No identified exceedances of direct contact RCLs.

Attached:
Tables of Pre-remedial Analytical Results? X Yes ____ No Maps of Pre-remedial Sample Locations? X Yes ____No

3. SOIL POST REMEDIATION ANALYTICAL RESULTS

Remedial Action Completed? ____ Yes X No 720.19 Analysis? X Yes ____ No (If yes, attach supporting documentation)

Were Soils Excavated? _____ Yes X No Quantity: _____ Disposal Method: _____

Final Confirmation Sampling Methods: _____

Soil Disposal Form Attached? ____ Yes _No X NA Final Disposal Location: _____

Estimated volume of insitu soils exceeding NR 720 RCLs: None
Attached:
Tables of Post-Remedial Analytical Results? _Yes/No X NA Maps of Post-Remedial Sample Locations? _Yes/No X NA

Brief Description of Remedial Action Taken:
NR 720.19 Analysis

4. GROUNDWATER ANALYTICAL RESULTS

Potential Receptors for Groundwater Migration Pathway: No identified exceedances of NR 140 ESs.

Extent of Contamination Defined? X Yes ____ No____ NA Remedial Action Completed? ____ Yes _____ No X NA

# of Sample Rounds: 1 Depth(s) to Groundwater/Flow Direction(s): 4' BGS/flow likely to north.

Field Analyses? X Yes ____ No Lab Analyses? X Yes ____No # of Sampling Points: 1

NR 141 Monitoring Wells Sampled: 0 # Temporary Groundwater Sampling Points Sampled: 1

Recovery Sumps Sampled: 0 # Municipal Wells Sampled: 0 # Private Wells Sampled: 0

Has DNR Been Notified of Substances in Groundwater w/o Standard? _____Yes _____No X NA

Any Potable Wells Within 1,200 Feet of Site? ____ Yes X No If Yes, How Many? _____

Have They Been Sampled? ____ Yes ____No Have Well Owners/Occupants Been Notified of Results? ____Yes ____No

Preventive Action Limit Exceeded? X Yes ____ No (If Yes, identify location(s): B-3-1

Enforcement Standard Exceeded? ____ Yes X No (If Yes, identify location(s): _____
Attached:
Tables of Analytical Results? X Yes ____ No Map of Groundwater Sample Location Map? X Yes ____ No

Brief Description of Remedial Action Taken:
Compared data to NR 140 Standards.

WDNR BRRTS Case #: 02-05-178563 WDNR Site Name: Carver Boat Corporation, Polyester/Styrene Contamination (Carver UST #3)

FOR DEPARTMENT USE ONLY

FIRST REVIEW DATE: 10-23-98 [ ] **Approved** [X] **Denied**

(Signature) (Signature) (Signature) (Signature)

SECOND REVIEW DATE: 3-9-99 [X] **Approved** [ ] **Denied**

R.C. Stoll (Signature) (Signature) (Signature) (Signature)

COMMITTEE RECOMMENDATION:

X **Closure Approved Per:**

- X No Restrictions
- ____ Groundwater Use Restriction
- ____ Zoning Verification
- ____ Deed Restriction
- ____ Deed Affidavit
- ____ Site Specific Close Out Letter Necessary
- ____ Well Abandonment Documentation
- ____ Soil Disposal Documentation
- ____ Public Notice Needed
- ____ NR 140 Exemption For: _____
- ____ Specific Comments: G.W. meets NR 140 PALs. Soils O.K. per SSRCL's

X **Closure Denied, Needs More:**

- ____ Investigation
- X Groundwater Monitoring - AT B3-1 for VOC's to establish PAL exemption or NA trend.
- ____ Soil Remediation
- ____ Groundwater Remediation
- ____ Documentation Of Soil Landspreading Or Biopile Destiny
- ____ Specific Comments: Soils OK according to site specific RCL once NR 140 PAL exemption or NA closure are met. Contaminated soil area appears to only be about 5' radius max from B3-1 location.

ATTACHMENTS

- Case Summary and Justification for Closure

Tables

- Table 1 - Soil Field Observations and Laboratory Results
- Table 2 - Groundwater Data from Temporary Well B-3-1

Figures

- Figure 1 - Site Location Diagram
- Figure 2 - Facility Locations
- Figure 3 - UST #3 Soil Boring Location Diagram

RCL Calculation Sheets

- Styrene - Groundwater Pathway
- Styrene - Soil Ingestion Pathway
- Styrene - Soil Inhalation Pathway

CASE HISTORY AND JUSTIFICATION FOR CLOSURE
CARVER BOAT CORPORATION
POLYESTER/STYRENE CONTAMINATION
(FORMER CARVER UST #3)
PULASKI, WISCONSIN
BRRTS #02-05-178563

Carver Boat underground storage tank (UST) #3 was removed September 26, 1997. The presence of volatile organic compounds (VOCs) was not obvious based on field observations and direct screening. However, the VOCs styrene and xylenes were detected in one soil sample tested in a laboratory. Based on this information, Carver reported a release to the Wisconsin Department of Natural Resources (WDNR).

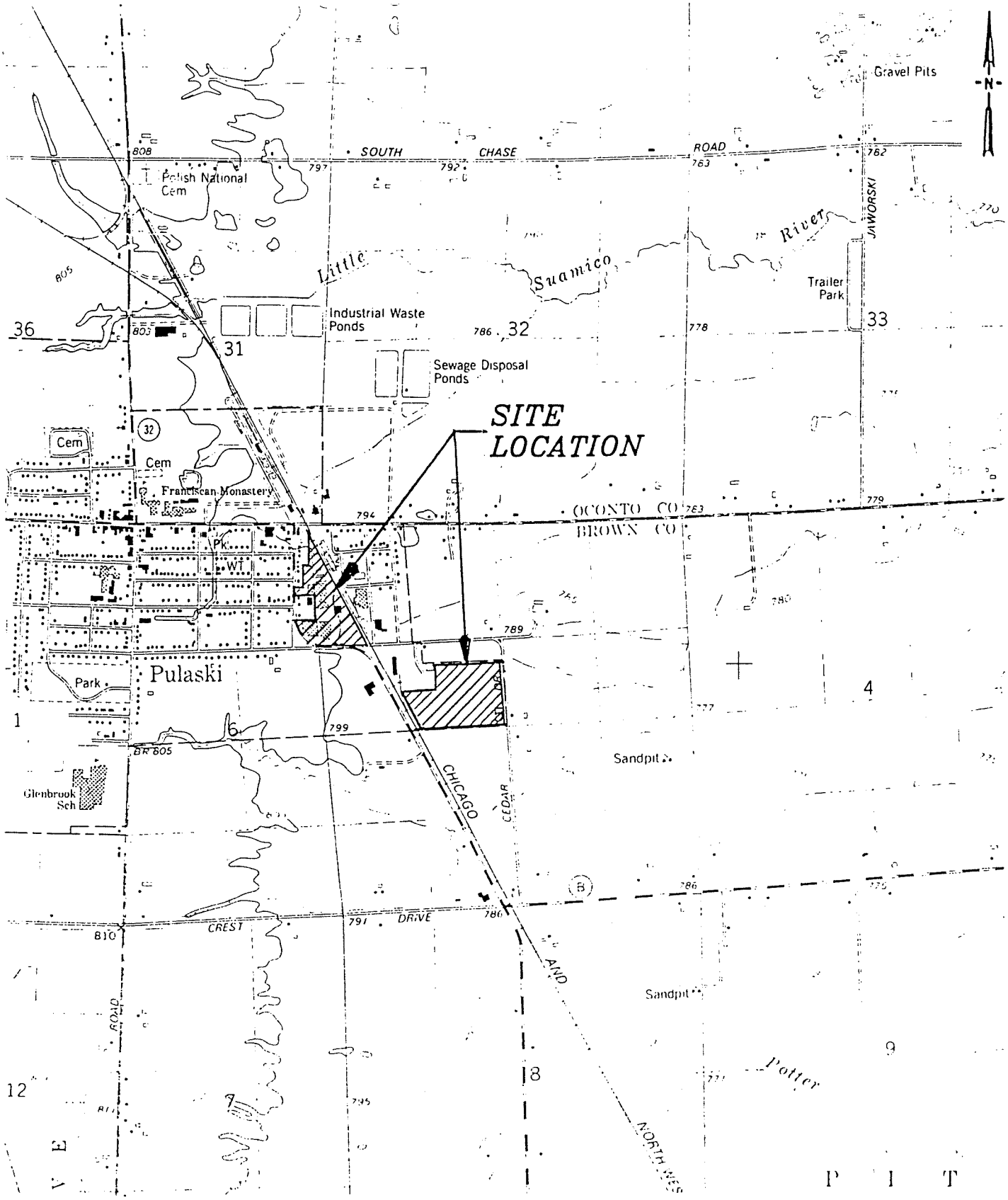
STS Consultants, Ltd., (STS) advanced four soil borings on July 17, 1998. A temporary monitoring well was installed in the boring located closest to the tank closure soil sample in which impacts were noted.

Soil testing for xylenes did not result in any detections exceeding the Wisconsin Administrative Code NR 720.09 residual contaminant level (RCL) based on protection of groundwater for xylenes of 4,100 micrograms per kilogram (µg/kg). Likewise, soil testing for styrene did not result in any detections exceeding site-specific RCLs calculated by STS. Site-specific RCLs (for non-industrial sites) were calculated to be:

- Protection of groundwater: 4,400 µg/kg
- Soil ingestion: 3,100,000 µg/kg
- Soil inhalation: 2,800,000 µg/kg

A groundwater sample collected from the temporary monitoring well was reported to contain styrene and chloromethane at concentrations exceeding the respective Wisconsin Administrative Code NR 140 preventive action limits (PALs), but not exceeding NR 140 enforcement standards (ES). No other PAL exceedances were reported.

STS, therefore, recommends that the site be closed by the WDNR on the basis of soil contaminant concentrations being less than RCLs determined using NR 720.09 and NR 720.19, and on groundwater concentrations being less than NR 140 ES.



MAP SOURCE: MODIFIED FROM PULASKI, WIS. U.S.G.S. QUADRANGLE DATED 1974.

STS Consultants Ltd.
Consulting Engineers

SITE LOCATION DIAGRAM
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY	[illegible]	3-24-98
CADFILE G479F001	SCALE 1"=2000'	
STS PROJECT NO. 23379XF	FIGURE NO. 1	

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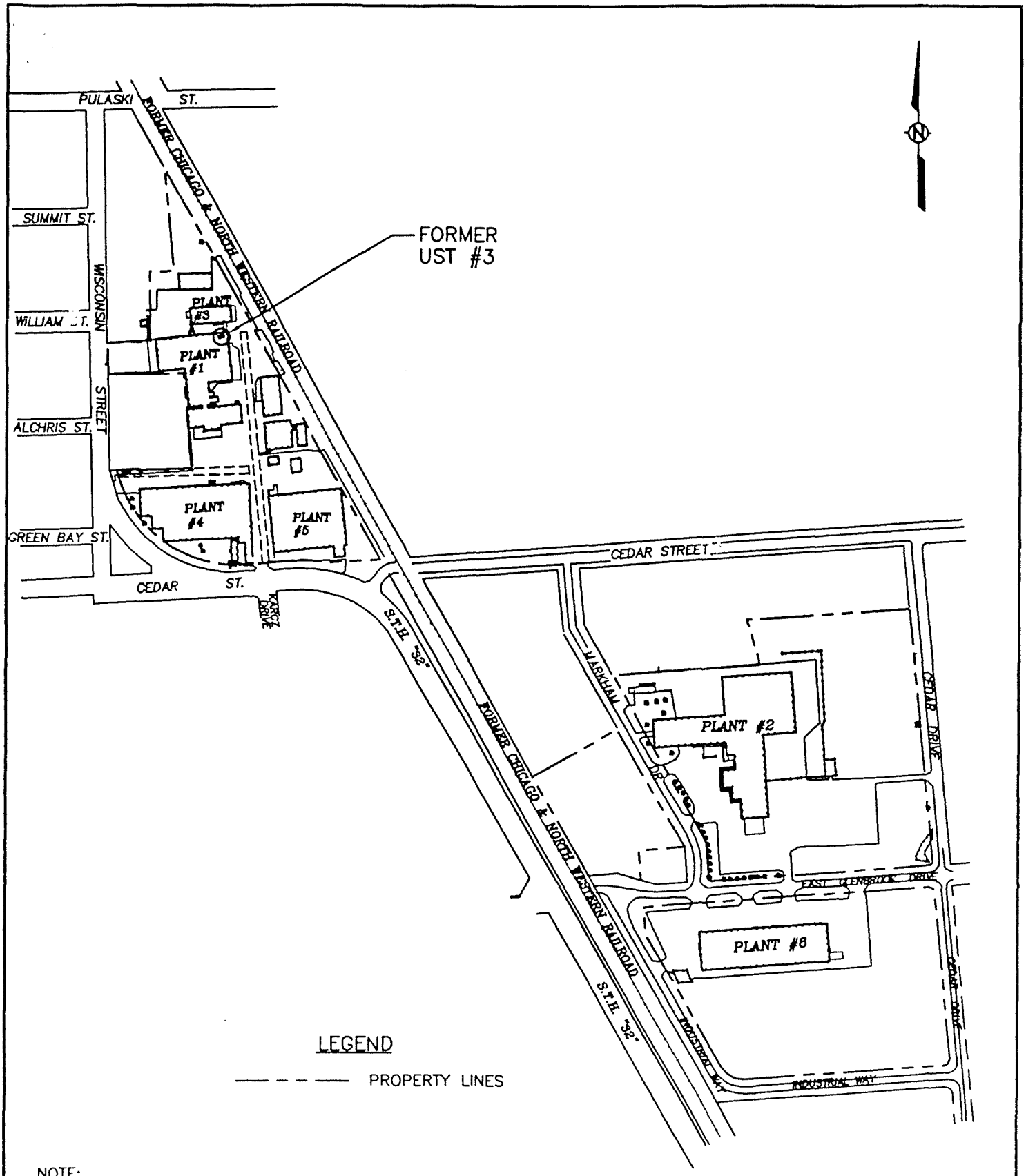

NOTE:
MAP MODIFIED FROM DRAWINGS FROM ROBERT E. LEE AND ASSOC.

STS Consultants Ltd.
Consulting Engineers

FACILITY LOCATIONS
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY	PCG	2-24-98
CADFILE G479F01	SCALE 1"=500'	
STS PROJECT NO. 23379XF	FIGURE NO. 2	

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TABLE 1
SOIL FIELD OBSERVATIONS AND LABORATORY RESULTS
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

(Samples collected July 17, 1998)

Tank Closure Site Assessment Samples

Sample Location	Depth (feet)	Soil Description	Odor	FID (units)	Styrene (µg/kg)	Xylenes (µg/kg)	TOC (µg/kg)
SS-1	3	Brown Fine to Medium Silty Sand	None Noted	<1	<25	<75	-
SS-2	3	Brown Fine to Medium Silty Sand	None Noted	<1	-	-	-
SS-3	3	Brown Fine to Medium Silty Sand	None Noted	<1	<25	<75	-
SS-4	2.5	Brown Fine to Medium Silty Sand	None Noted	<1	830	<78[1]	-
SS-5	2.5	Brown Fine to Medium Silty Sand	None Noted	<1	-	-	-
SS-6	2.5	Brown Fine to Medium Silty Sand	None Noted	<1	<25	<75	-

Subsurface Investigation Samples

Sample Location	Depth (feet)	Soil Description	Odor	FID (units)	Styrene (µg/kg)	Xylenes (µg/kg)	TOC (µg/kg)
B-3-1	0.5 - 2.5	Light Brown Fine Silty Sand	None Noted	75	1900	<90[2]	5710
B-3-2	0.5 - 2.5	Light Brown Fine Silty Sand	None Noted	2	440	<75	4270
B-3-3	0.5 - 2.5	Light Brown Fine Silty Sand	None Noted	3	<25	<75	3560
B-4-3	0.5 - 2.5	Light Brown Fine Silty Sand	Possible Styrene	30	250	<75	810

Notes:

VOCs not listed were not detected in any sample
FID = Flame Ionization Detector
- = Not Analyzed
TOC = Total Organic Carbon

[1]m & p - xylene detected at 53 µg/kg
[2]o - xylene detected at 40 µg/kg

TABLE 2
GROUNDWATER DATA FROM TEMPORARY WELL B-3-1
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

(Samples collected August 13, 1998)

Field Parameters

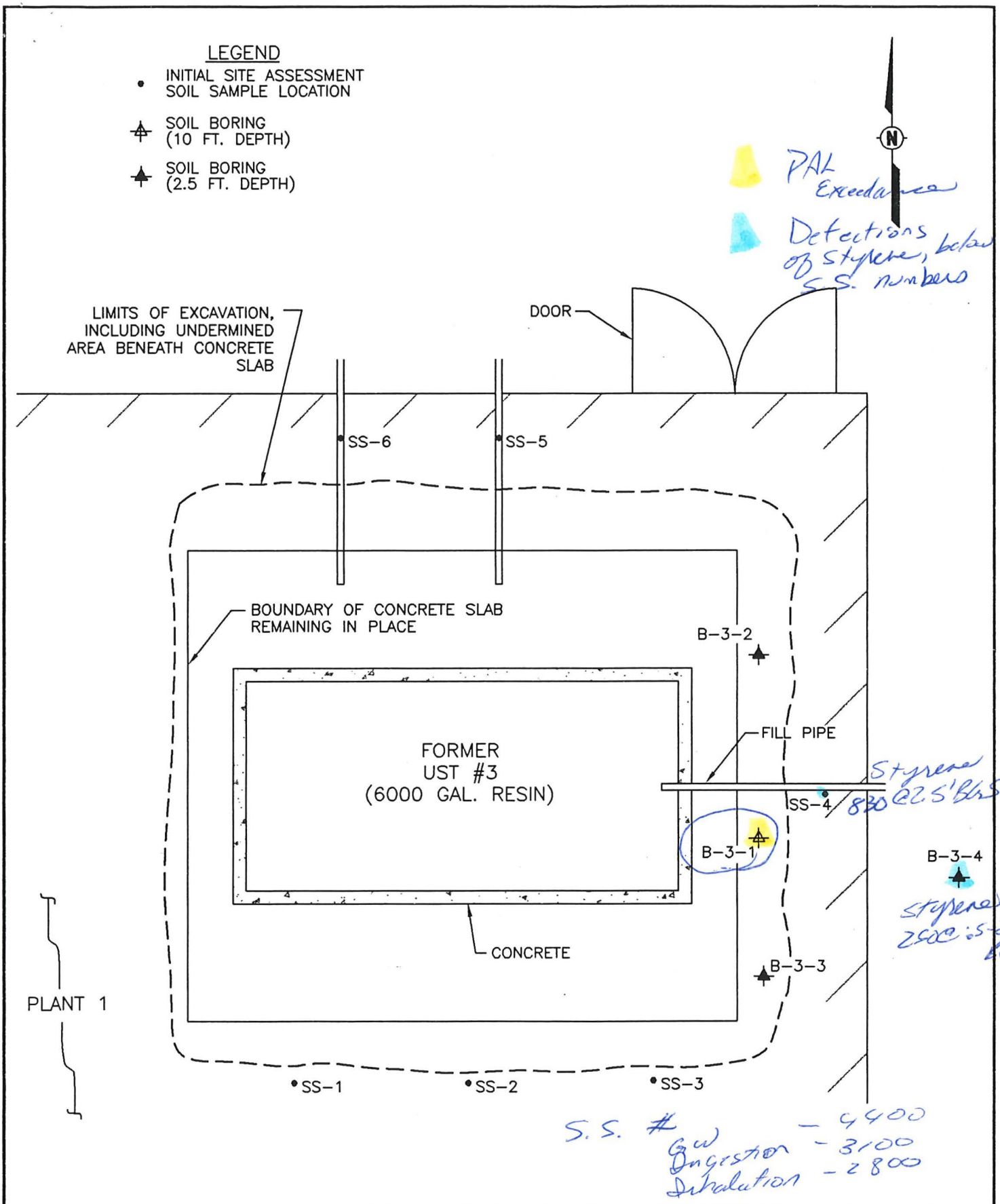
Depth to Water (Ft from TPVC)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	pH (units)	Specific Conductance (µmhos/cm)	Temperature (°F)	Color	Odor Noted
3.63	2	0	6.18	849	73	Clear	None Noted

Analytical Results

	VOCs* (µg/L)								Nitrate/ Nitrite (mg/L)	Sulfate (mg/L)
	Acetone	Benzene	Chloroethane	Chloromethane	1,1-Dichloroethane	Ethylbenzene	Isopropylbenzene	Styrene		
Test Result	3.0	1.0	1.0	1.7	1.3	43	2.1	27	<0.014	25
NR 140 ES	1000	5.0	400	3.0	850	700	NE	100		
NR 140 PAL	200	0.5	80	0.3	85	140	NE	10		

*VOCs not listed were not detected

NE: Not established



STS Consultants Ltd.
Consulting Engineers

UST #3 SOIL BORING LOCATION DIAGRAM
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	R.A.B.	8-12-98
CHECKED BY	W.F.N.	8-12-98
APPROVED BY		
CADFILE	SCALE 1"=5'	
STS PROJECT NO. 23379XA	FIGURE NO. 3	

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Carver Boat Corporation UST #3

Pulaski, Wisconsin

Styrene--Groundwater Pathway

Site-Specific Residual Contaminant Level Calculation

Paramete	Value	Units	Description	Source
K_{oc}	**776**	L/kg	Organic Carbon Partition Coefficient	EPA Soil Screening Guidance[1]
f_{oc}	**0.001**	g/g	Fraction Organic Carbon Content	WDNR Default Value*
K_d	0.8	L/kg	Soil:Water Distribution Coefficient	K_{oc} x f_{oc}
θ	0.2	cm^3-H_20/cm^3-soil	Volumetric Water Content, Vadose Zone Soils	WDNR Default Value
n	0.43	cm^3-void/cm^3-soil	Porosity	WDNR Default Value
d	152.4	cm	Groundwater Mixing Zone Thickness	WDNR Default Value
R	25.4	cm	Annualized Groundwater Recharge Rate	WDNR Default Value
ρ_b	1.5	g-soil/cm^3-soil	Soil Bulk Density	WDNR Default Value
PAL	10	µg/L	Preventive Action Limit	NR 140
ES	100	µg/L	Enforcement Standard	NR 140

Calculate Site-Specific Residual Contaminant Level (RCL)

$$DAF = d/R\theta \times (K_d \times \rho_b + n)$$

DAF 48 Dilution Attenuation Factor

$$RCL_{ES} = ES \times 10^{-3}_{mg/\mu g} \times (K_d + \theta/\rho_b) \times DAF$$

RCL_{ES} **4.4** mg/kg **Styrene** Site-Specific Residual Contaminant Level using ES

Calculated by: Roger Miller 10/9/98

Checked by: WFN 10/9/98

Notes:

1) Site-Specific Residual Contaminant Level (RCL) equation and default values from WDNR Publication RR-519-97, "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs)--Interim Guidance" (April 1997).

2) NR 140 Groundwater Enforcement Standard (ES) and Preventive Action Limit (PAL) from s. NR140.10, Wisconsin Administrative Code (October 1996).

3) [1]USEPA, 1996, Soil Screening Guidance: Technical Background Document: Publication EPA/540/R-95/128, Washington, D. C.

4) *WNDR default foc value was used even though the average TOC concentration exceeded this amount by a factor of 3.5.

OK
R.S.

Styrene

Soil Ingestion Pathway (RfD)

Carver Boat Corporation

Pulaski, Wisconsin

Algorithm for Ingestion of Noncarcinogenic Contaminants in Non-Industrial (Residential) Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	0.2	WDNR Default Value
BWc - Average Body Weight for Child (kg)	15	WDNR Default Value
AT - Averaging Time (years)	6	WDNR Default Value
RfDo - Oral Reference Dose (mg/kg-day)	2.00E-01	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	350	WDNR Default Value
EDc - Exposure Duration During Ages 1-6 (year)	6	WDNR Default Value
IRc - Ingestion Rate of Soil Age 1-6 (mg/day)	200	WDNR Default Value

Residual Contaminant Level (mg/kg) = $\frac{\text{THQ x BWc x AT x 365 day/year}}{\text{1/RfDo x } 10^{-6} \text{ kg/mg x EF x EDc x IRc}}$ = **3100**

Algorithm for Ingestion of Noncarcinogenic Contaminants in Industrial Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	1	WDNR Default Value
BWa - Average Body Weight For Adult (kg)	70	WDNR Default Value
AT - Averaging Time (years)	25	WDNR Default Value
RfDo - Oral Reference Dose (mg/kg-day)	2.00E-01	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	250	WDNR Default Value
ED - Exposure Duration (year)	25	WDNR Default Value
IRa - Ingestion Rate for Adult (mg/day)	100	WDNR Default Value

Residual Contaminant Level (mg/kg) = $\frac{\text{THQ x BWa x AT x 365 day/year}}{\text{1/RfDo x } 10^{-6} \text{ kg/mg x EF x ED x IRa}}$ = **204000**

Calculated by: Roger Miller 9/17/98

Checked by: WFN 9/22/98

Note:

[1]USEPA, 1996, Soil Screening Guidance: Technical Background Document: Publication EPA/540/R-95/128, Washington, D. C.

Styrene
Soil Inhalation Pathway (RfC)

Carver Boat Corporation
Pulaski, Wisconsin

Algorithm for Inhalation of Noncarcinogenic Contaminants from Non-Industrial (Residential) Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	0.2	WDNR Default Value
AT - Averaging Time (years)	30	WDNR Default Value
RfC - Reference Concentration (mg/m^3)	1.0E+00	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	350	WDNR Default Value
ED - Exposure Duration (year)	30	WDNR Default Value
VF - Volatilization Factor (kg/m^3)	1.34E+04	Calculation
Cp - Concentration of Particles less than 10 μm ($\mu g/m^3$)	1.4	WDNR Default Value

Residual Contaminant Level (mg/kg) = $\frac{THQ \times AT \times 365\ day/year}{1/RfC \times EF \times ED \times [(1/VF) + (Cp \times 10^{-9}\ kg/\mu g)]}$ = **2800**

Algorithm for Inhalation of Noncarcinogenic Contaminants in Industrial Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	1	WDNR Default Value
AT - Averaging Time (years)	25	WDNR Default Value
RfC - Reference Concentration (mg/m^3)	1.0E+00	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	250	WDNR Default Value
ED - Exposure Duration (year)	25	WDNR Default Value
IRc - Inhalation Rate Correction for Adult Laborer (unitless)	1.2	WDNR Default Value
VF - Volatilization Factor (kg/m^3)	1.34E+04	Calculation
Cp - Concentration of Particles less than 10 μm ($\mu g/m^3$)	1.4	WDNR Default Value

Residual Contaminant Level (mg/kg) = $\frac{THQ \times AT \times 365\ day/year}{1/RfC \times EF \times ED \times IRc \times [(1/VF) + (Cp \times 10^{-9}\ kg/\mu g)]}$ = **16000**

Volatilization Factor (m^3/kg) = $\frac{Q/C \times (3.14 \times D_A \times T)^{1/2} \times 10^{-4} m^2/cm^2}{2 \times \rho_b \times D_A}$ = **1.34E+04**

D_A (cm^2/sec) = $\frac{[(\theta_a^{10/3} D_a H' + \theta_w^{10/3} D_w)/n^2]}{\rho_b K_d + \theta_w + \theta_a H'}$ = **8.70E-05**

Parameter	Value	Source
Q/C - Inverse Mean Concentration at Center of Source $(g/m^2\text{-sec})/(kg/m^3)$	68.81	WDNR Default Value
D_A - Apparent Diffusivity (cm^2/sec)	8.70E-05	Calculation
T - Exposure Intervals (sec)	9.50E+08	WDNR Default Value
ρ_b - Soil Dry Bulk Density (g/cm^3)	1.5	WDNR Default Value
θ_a - Air Filled Porosity (cm^3/cm^3)	0.28	WDNR Default Value
D_a - Air Diffusion Coefficient (cm^2/sec)	7.10E-02	EPA Soil Screening Guidance[1]
H' - Henry's Law Constant (unitless)	1.13E-01	EPA Soil Screening Guidance[1]
θ_w - Volumetric Soil Moisture Content (cm^3/cm^3)	0.15	WDNR Default Value
D_w - Water Diffusion Coefficient (cm^2/sec)	8.00E-06	EPA Soil Screening Guidance[1]
n - Total Soil Porosity (cm^3/cm^3)	0.43	WDNR Default Value
K_d - Soil:Water Distribution Coefficient (L/kg)	4.66	Koc x foc
K_{oc} - Organic Carbon:Water Partitioning Coefficient (L/kg)	776	EPA Soil Screening Guidance[1]
f_{oc} - Soil Fraction Organic Carbon (g/g)	0.006	WDNR Default Value (for Inhalation Route only)

Calculated by: Roger Miller 9/17/98

Checked by: WFN 9/22/98

Note:

[1]USEPA, 1996, Soil Screening Guidance: Technical Background Document: Publication EPA/540/R-95/128, Washington, D. C.

GROUNDWATER DATA FROM TEMPORARY WELL B-3-1
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

Field Parameters

Date	Depth to Water (ft. from TPVC)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	pH (units)	Specific Conductance (µmhos/cm)	Temperature (°F)	Color	Odor Noted
8/13/98	3.63	2	0	6.18	849	73	Clear	None Noted
11/20/98	4.33	<1	1	NR	NR	NR	Not Noted	None Noted
2/4/99	4.12	NR	NR	NR	NR	NR	Clear	None Noted

Analytical Results

Date	VOCs* (µg/L)								Nitrate/ Nitrite (mg/L)	Sulfate (mg/L)
	Acetone	Benzene	Chloroethane	Chloromethane	1,1-Dichloroethane	Ethylbenzene	Isopropylbenzene	Styrene		
8/13/98	3.0	1.0	1.0	1.7	1.3	43	2.1	27	<0.014	25
11/20/98	NA	1.6	<1.0	<2.0	<1.0	<1.0	2.06	<1.0	NA	NA
2/4/99	9.0	<0.5	<1.0	<2.0	<1.0	<1.0	<1.0	9.87	NA	NA
NR 140 ES	1000	5.0	400	3.0	850	700	NE	100		
NR 140 PAL	200	0.5	80	0.3	85	140	NE	10		

*VOCs not listed were not detected

NE: Not established

NM: Not measured

NA: Not analyzed

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

Remediation and Redevelopment
1125 North Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5916
FAX 920-492-5859
TDD 920-492-5812

February 25, 1999

Carver Boat Corporation
Attn: Ted Maloney
P.O. Box 1010
Pulaski, WI 54162

SUBJECT: Acknowledgment of Receipt/Request for Closure Review
Carver Boats - Polyester/Styrene Tank #3, 790 Markham, Pulaski
WDNR BRRTS ID #: 02-05-178563

Dear Mr. Maloney:

The Department received your request for closeout review on February 25, 1999. Due to staffing levels and the backlog of non-emergency cases, requests for closure are logged and reviewed in the order they are received. However, we hope to be able to review your request within 90 days. After Department review of the case, a letter will notify you either that closure is approved or that additional work is required.

If you have any questions, please contact me at (920) 492-5943.

Sincerely,

Kristin Nell
Hydrogeologist
Remediation & Redevelopment Program

cc: Bill Noel, STS Consultants Ltd.
1035 Kepler Drive, Green Bay, WI 54311

STS Consultants, Ltd.
Solutions through Science & Engineering

February 24, 1999

RECEIVED
FEB 25 1999
LMD SOLID WASTE

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

Subject: Additional Data to Supplement Request for Closure, VOC Impacts in the Vicinity of Former Underground Storage Tank #3, Carver Boat Corporation, 790 Markham Drive, Pulaski, Wisconsin – BRRTS Case #02-05-178563 – STS Project No. 23379XA

Dear Ms. Nell:

On behalf of Carver Boat Corporation, STS Consultants, Ltd., (STS) is pleased to submit additional data to supplement a request for closure submitted for the above-referenced site on October 9, 1998.

As requested in a letter from Ms. Roxanne Nelezen Chronert dated November 5, 1998, additional groundwater data were collected from the temporary monitoring well in the vicinity of former Carver underground storage tank #3. Samples were collected on November 20, 1998, and February 4, 1999. The November 20, 1998, sample was analyzed for volatile organic compounds (VOCs). The February 4, 1999, sample was analyzed for petroleum VOC, acetone, chloroethane, chloromethane, 1,1-dichloroethane, isopropylbenzene, and styrene (VOCs which had previously been detected in this vicinity), in accordance with our February 2, 1999, telephone discussion.

A groundwater data table is attached to this letter, as are the analytical test reports.

No exceedances of Wisconsin Administrative Code Chapter NR 140 enforcement standards were reported in any of the groundwater samples. The only NR 140 preventive action limit exceedance in either of the two most recent samples was for benzene, in the November 20, 1998, sample. No benzene was identified in the February 4, 1999, sample. These data support those collected previously, and provide evidence of a steady to downward trend in groundwater contaminant concentrations. We therefore request that you return the site closure request to the closure committee. A $750 check was included with the original submittal.

Please contact us at 920-468-1978 with any questions regarding this project.

Sincerely,

STS CONSULTANTS, LTD.

William F. Noel, P.E.
Senior Project Engineer

Mark A. Bergeon, P.G.
Principal Geologist

WFN/ddd.wd

Enclosures:
Groundwater Data Table
Analytical Test Reports

Copy: Mr. Ted Maloney
Carver Boat Corporation
790 Markham Drive
P.O. Box 1010
Pulaski, Wisconsin 54162

Mr. Jeffery Melby, P.E.
Genmar Holdings, Inc.
100 South 5th Street, Suite 2400
Minneapolis, Minnesota 55402

"I, Mark A. Bergeon, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Mark A. Bergeon, P.G. 2/24/99
Principal Geologist

"I, William F. Noel, P.E., hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

William F. Noel, P.E., #28909 PE. stamp
Senior Project Engineer

GROUNDWATER DATA FROM TEMPORARY WELL B-3-1
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

Field Parameters

Date	Depth to Water (ft. from TPVC)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	pH (units)	Specific Conductance (µmhos/cm)	Temperature (°F)	Color	Odor Noted
8/13/98	3.63	2	0	6.18	849	73	Clear	None Noted
11/20/98	4.33	<1	1	NR	NR	NR	Not Noted	None Noted
2/4/99	4.12	NR	NR	NR	NR	NR	Clear	None Noted

Analytical Results

	VOCs* (µg/L)								Nitrate/ Nitrite (mg/L)	Sulfate (mg/L)
Date	Acetone	Benzene	Chloroethane	Chloromethane	1,1-Dichloroethane	Ethylbenzene	Isopropylbenzene	Styrene		
8/13/98	3.0	1.0	1.0	1.7	1.3	43	2.1	27	<0.014	25
11/20/98	NA	1.6	<1.0	<2.0	<1.0	<1.0	2.06	<1.0	NA	NA
2/4/99	9.0	<0.5	<1.0	<2.0	<1.0	<1.0	<1.0	9.87	NA	NA
NR 140 ES	1000	5.0	400	3.0	850	700	NE	100		
NR 140 PAL	200	0.5	80	0.3	85	140	NE	10		

*VOCs not listed were not detected

NE: Not established

NM: Not measured

NA: Not analyzed

February 19, 1999

STS Consultants
1035 Kepler Drive
Green Bay, WI 54311

Attn: Bill Noel

Re: 23379XA

Please find enclosed the analytical results for the sample(s) received February 6, 1999.

The chain of custody document is enclosed.

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

Sincerely,

US Filter/Enviroscan

James R. Salkowski

James R. Salkowski
General Manager

USFilter

UNITED STATES FILTER CORPORATION

STS Consultants
1035 Kepler Drive
Green Bay, WI 54311

CUST NUMBER: 23379XA
SAMPLED BY: Client
DATE REC'D: 02/06/99
REPORT DATE: 02/19/99
PREPARED BY: JRS
REVIEWED BY:

Attn: Bill Noel

	Units	Reporting Limit	B-3-1 02/04/99	Qualifiers	Date Analyzed	By
EPA 8021A						
Acetone	µg/l	5.0	8.97		02/11/99	LMP
Benzene	µg/l	0.5	ND		02/11/99	LMP
Chloroethane	µg/l	1.0	ND		02/11/99	LMP
Chloromethane	µg/l	2.0	ND		02/11/99	LMP
1,1-Dichloroethane	µg/l	1.0	ND		02/11/99	LMP
Ethylbenzene	µg/l	1.0	ND		02/11/99	LMP
Isopropylbenzene	µg/l	1.0	ND		02/11/99	LMP
Methyl tert Butyl Ether	µg/l	1.0	ND		02/11/99	LMP
Styrene	µg/l	1.0	9.87		02/11/99	LMP
Toluene	µg/l	1.0	ND		02/11/99	LMP
1,2,4-Trimethylbenzene	µg/l	1.0	ND		02/11/99	LMP
1,3,5-Trimethylbenzene	µg/l	1.0	ND		02/11/99	LMP
m- & p-Xylene	µg/l	1.0	ND		02/11/99	LMP
o-Xylene & Styrene	µg/l	1.0	ND		02/11/99	LMP
Analytical No.:			62540			

	Units	Reporting Limit	B-6-1 02/04/99	Qualifiers	Date Analyzed	By
EPA 8021A						
Acetone	µg/l	5.0	ND		02/11/99	LMP
Benzene	µg/l	0.5	ND		02/11/99	LMP
Ethylbenzene	µg/l	1.0	ND		02/11/99	LMP
Methyl tert Butyl Ether	µg/l	1.0	ND		02/11/99	LMP
Styrene	µg/l	1.0	1.24		02/11/99	LMP
Tetrachloroethylene	µg/l	1.0	ND		02/11/99	LMP
Toluene	µg/l	1.0	ND		02/11/99	LMP
1,2,4-Trimethylbenzene	µg/l	1.0	ND		02/11/99	LMP
1,3,5-Trimethylbenzene	µg/l	1.0	ND		02/11/99	LMP
m- & p-Xylene	µg/l	1.0	ND		02/11/99	LMP
o-Xylene & Styrene	µg/l	1.0	ND		02/11/99	LMP
Analytical No.:			62541			

ND = Analyzed but not detected.

CHAIN OF CUSTODY RECORD

№ 24529

Contact Person BILL NOEL
Phone No. 920-468-1978 Office G.B.
Project No. 23379XA PO No.
Project Name CARVER BOAT CORP UST #3 & UST #6&7

Special Handling Request
- ☐ Rush
- ☐ Verbal
- ☐ Other

RECORD NUMBER 1 THROUGH 1
Laboratory ENVIROSCAN
Contact Person SHARON MACIBEY
Phone No.
Results Due

Sample I.D.	Date 1999	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 Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
B-3-1	2/4		X		2	WATER	X			60062540			PARTIAL VOC's (8021) (PVOC's + ACETONE + CHLOROETHANE, CHLOROMETHANE, 1,1-DICHLOROETHANE, ISOPROPYLBENZENE STYRENE)	
B-6-1	2/4		X		2	WATER	X			60062541			PARTIAL VOC's (8021) (PVOC's + ACETONE + STYRENE + TETRACHLOROETHENE)	
B-6-2	"		"		"	"	"			60062542			"	
B-6-3										60062543				
B-6-4										60062544				
B-6-5	"		"		"	"	"			60062545				

Collected by:		Date 2.4.99	Time 3:00P	Delivery by:	Date / Time
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:	Cindy Kluge	Date 2/6/99	Time 8:20AM	Relinquished by:	Date / Time

Laboratory Comments Only: Seals Intact Upon Receipt? ☒ Yes ☐ No ☐ N/A Received on Ice

Final Disposition:

Comments (Weather Conditions, Precautions, Hazards):

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

9/94cp10k

STS Consultants Ltd.
Consulting Engineers

TELEPHONE LOG

SITE NAME: Carver Boats - Polyester/Styrene **DATE:** 02-02-99

TRACKING NUMBER: 02-05-178563 **TIME:** ~8:30

CONTACT NAME: Bill Nail **PHONE:**

COMPANY AGENCY: STS

INITIATED BY: KN

Calling to see if gw sampling parameters can be reduced. STS/RP would like to sample only for the parameters previously detected in soil & gw. WDNR agreed to request.

SIGNATURE: Kristin Nelson

TELEPHONE LOG

SITE NAME: Carver Boats - Polyester/Styrene **DATE:** 12-14-98

TRACKING NUMBER: 02-05-178563 **TIME:** ~11:20

CONTACT NAME: Bill Nail **PHONE:** 920-468-1978

COMPANY AGENCY: STS

INITIATED BY: KN

Returning Bills call from 12-11-98. Based on gw results from latest round of sampling I would suggest collecting another round of samples to establish a trend. If results from this round are consistent with the last 2 rounds, resubmit for closure. Gw results given verbally over the phone Benzene 1.6 ug/L, Isopropylbenzene 2.06 ug/L etc.

SIGNATURE: Kristin Kern

USFilter

ENVIROSCAN SERVICES
301 WEST MILITARY ROAD
ROTHSCHILD, WI 54474

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

December 9, 1998

STS Consultants
1035 Kepler Drive
Green Bay, WI 54311

Attn: Bill Noel

Re: 23379XA

Please find enclosed the analytical results for the sample(s) received November 21, 1998.

The chain of custody document is enclosed.

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

Sincerely,

US Filter/Enviroscan

Laurie Pietrowski

Laurie M. Pietrowski
Analytical Chemist

USFilter

UNITED STATES FILTER CORPORATION

STS Consultants
1035 Kepler Drive
Green Bay, WI 54311

CUST NUMBER: 23379XA
SAMPLED BY: Client
DATE REC'D: 11/21/98
REPORT DATE: 12/09/98
PREPARED BY: LMP
REVIEWED BY:

Attn: Bill Noel

	Units	Reporting Limit	B-3-1 11/20/98	Qualifiers	Date Analyzed	By
EPA 8021						
Benzene	µg/l	0.5	1.62		11/28/98	LMP
Bromobenzene	µg/l	2.0	ND		11/28/98	LMP
Bromodichloromethane	µg/l	1.0	ND		11/28/98	LMP
n-Butylbenzene	µg/l	1.0	ND		11/28/98	LMP
sec-Butylbenzene	µg/l	1.0	ND		11/28/98	LMP
tert-Butylbenzene	µg/l	1.0	ND		11/28/98	LMP
Carbon Tetrachloride	µg/l	1.0	ND		11/28/98	LMP
Chlorobenzene	µg/l	1.0	ND	SPL	11/28/98	LMP
Chlorodibromomethane	µg/l	1.0	ND		11/28/98	LMP
Chloroethane	µg/l	1.0	ND		11/28/98	LMP
Chloroform	µg/l	1.0	ND		11/28/98	LMP
Chloromethane	µg/l	2.0	ND		11/28/98	LMP
o-Chlorotoluene	µg/l	1.0	ND		11/28/98	LMP
p-Chlorotoluene	µg/l	2.0	ND		11/28/98	LMP
1,2-Dibromo-3-chloropropane	µg/l	1.0	ND		11/28/98	LMP
1,2-Dibromoethane	µg/l	1.0	ND		11/28/98	LMP
1,2-Dichlorobenzene	µg/l	1.0	ND		11/28/98	LMP
1,3-Dichlorobenzene	µg/l	1.0	ND		11/28/98	LMP
1,4-Dichlorobenzene	µg/l	1.0	ND		11/28/98	LMP
Dichlorodifluoromethane	µg/l	2.0	ND		11/28/98	LMP
1,1-Dichloroethane	µg/l	1.0	ND		11/28/98	LMP
1,2-Dichloroethane	µg/l	1.0	ND		11/28/98	LMP
1,1-Dichloroethylene	µg/l	1.0	ND		11/28/98	LMP
cis-1,2-Dichloroethylene	µg/l	2.0	ND		11/28/98	LMP
trans-1,2-Dichloroethylene	µg/l	1.0	ND		11/28/98	LMP
1,2-Dichloropropane	µg/l	1.0	ND		11/28/98	LMP
1,3-Dichloropropane	µg/l	1.0	ND		11/28/98	LMP
2,2-Dichloropropane	µg/l	2.0	ND	CSL	11/28/98	LMP
Ethylbenzene	µg/l	1.0	ND		11/28/98	LMP
Hexachlorobutadiene	µg/l	1.0	ND		11/28/98	LMP
Isopropylbenzene	µg/l	1.0	2.06	SPL	11/28/98	LMP
Isopropyl Ether	µg/l	1.0	ND		11/28/98	LMP
p-Isopropyltoluene	µg/l	1.0	ND		11/28/98	LMP
Methyl tert Butyl Ether	µg/l	1.0	ND		11/28/98	LMP
Methylene Chloride	µg/l	2.0	ND		11/28/98	LMP
Naphthalene	µg/l	1.0	ND		11/28/98	LMP
n-Propylbenzene	µg/l	1.0	ND		11/28/98	LMP
Tetrachloroethylene	µg/l	1.0	ND		11/28/98	LMP
1,1,2,2-Tetrachloroethane	µg/l	1.0	ND		11/28/98	LMP
Toluene	µg/l	1.0	ND		11/28/98	LMP
1,2,3-Trichlorobenzene	µg/l	1.0	ND		11/28/98	LMP
1,2,4-Trichlorobenzene	µg/l	1.0	ND		11/28/98	LMP
1,1,1-Trichloroethane	µg/l	1.0	ND		11/28/98	LMP
1,1,2-Trichloroethane	µg/l	1.0	ND		11/28/98	LMP
Trichloroethylene	µg/l	0.5	ND		11/28/98	LMP
Analytical No.:			56335			

ND = Analyzed but not detected.

USFilter

UNITED STATES FILTER CORPORATION

STS Consultants
1035 Kepler Drive
Green Bay, WI 54311

CUST NUMBER: 23379XA
SAMPLED BY: Client
DATE REC'D: 11/21/98
REPORT DATE: 12/09/98
PREPARED BY: LMP
REVIEWED BY:

Attn: Bill Noel

	Units	Reporting Limit	B-3-1 11/20/98	Qualifiers	Date Analyzed	By
EPA 8021						
Trichlorofluoromethane	µg/l	1.0	ND		11/28/98	LMP
1,2,4-Trimethylbenzene	µg/l	1.0	ND		11/28/98	LMP
1,3,5-Trimethylbenzene	µg/l	1.0	ND		11/28/98	LMP
Vinyl Chloride	µg/l	0.2	ND		11/28/98	LMP
m- & p-Xylene	µg/l	1.0	ND		11/28/98	LMP
o-Xylene & Styrene	µg/l	1.0	ND		11/28/98	LMP
Analytical No.:			56335			

ND = Analyzed but not detected.

USFilter

UNITED STATES FILTER CORPORATION

STS Consultants
1035 Kepler Drive
Green Bay, WI 54311

CUST NUMBER: 23379XA
SAMPLED BY: Client
DATE REC'D: 11/21/98
REPORT DATE: 12/09/98
PREPARED BY: LMP
REVIEWED BY:

Attn: Bill Noel

Qualifier Descriptions

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

CHAIN OF CUSTODY RECORD

№ 24506

Contact Person: Bill Noel
Phone No. ______ Office ______
Project No. 23379XA PO No. ______
Project Name: Carver

Green Bay

Special Handling Request
- ☐ Rush
- ☐ Verbal
- ☐ Other

RECORD NUMBER ______ THROUGH ______
Laboratory: En Chem
Contact Person ______
Phone No. ______
Results Due ______

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 Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
B-3-1	11/20		X		3	Water	X						VOC (8021)	15056335
														10
MW-4-1			X		6	Water							VOC (8021) PAH, Sulfate,	Nitrates/Nitrite 15056336
MW-4-2	↓													15056337

Collected by: Pat McCleary	Date 11/20/98	Time	Delivery by: Courier	Date	Time
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: Elizabeth C. Zittel	Date 11/24/98	Time 11:45am	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt? ☒ Yes ☐ No ☐ N/A rec. on ice

Final Disposition:

Comments (Weather Conditions, Precautions, Hazards):

st sque
210757
bile 2
12-9

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

9/94cp10k

STS Consultants Ltd.
Consulting Engineers

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

Northeast Regional Headquarters
Solid Waste Office
PO Box 10448, 1125 N. Military Ave.
Green Bay, Wisconsin 54307-0448
TELEPHONE 414-492-5916
FAX 414-492-5859
TDD 414-492-5812

November 5, 1998

Carver Boat Corp.
Tel Maloney
PO Box 1010
Pulaski WI 54162

SUBJECT: Carver Boat Corp. Polyester/Styrene Tank; 790 Markham; Pulaski, Wisconsin
BRRTS CASE #02-05-178563

Dear Mr. Maloney:

On November 2, 1998, the above-named site was reviewed by the Northeast Region Closure Committee for a determination as to whether or not the case qualified for close out under ch. NR 726, Wis. Adm. Code. After a careful review, the committee has decided this case cannot be closed at this time.

Based on the investigative and remedial documentation provided to the Department, it appears that the contamination at the above-named site is not in compliance with the requirements of chs. NR 700 to 724, Wis. Adm. Code. Therefore, the committee is requesting additional groundwater Volatile Organic Compound (VOC) sampling at or near B3-1 to establish groundwater contamination levels and a trend in the contamination levels. When there is evidence that a trend in the groundwater levels has been established this case can again be submitted for closure.

If you have additional relevant information which was not formerly provided to the WDNR, you should resubmit this information to the WDNR for reevaluation.

If you have any questions regarding this determination, please contact me at 920-492-5592.

Sincerely,

Roxanne Nelezen Chronert
Spills Coordinator - Hydrogeologist

cc: William Noel; STS Consultants, Ltd.; 1035 Kepler Drive; Green Bay WI 54311

TELEPHONE LOG

SITE NAME: Carver - Stypere **DATE:** 11-3-98

BRRTS CASE #: _____ **TIME:** 14:40

PECFA CLAIM #: _____ (800) (414) (715)

TO/FROM: Bill Noel **NUMBER:** (920) 468-1978 (608)

COMPANY/AGENCY: STS

Left message regarding closure & additional monitoring needed.

ROXANNE NELEZEN CHRONERT

STS Consultants, Ltd.
Solutions through Science & Engineering

FEE RECEIVED
Date 10-15-98
WDNR - NER RNC

October 9, 1998

Received
10-15-98 RNC

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

Subject: Request for Closure, VOC Impacts in the Vicinity of Former Underground Storage Tank #3, Carver Boat Corporation, 790 Markham Drive, Pulaski, Wisconsin - BRRTS Case #02-05-178563 – STS Project No. 23379XA

Dear Ms. Nelezen Chronert:

STS Consultants, Ltd., (STS) is pleased to submit this report which describes the methods used and the results of a subsurface investigation at the above-referenced site and requests site closure.

A Wisconsin Department of Natural Resources (WDNR) Case Summary and Close Out Form (with attachments) accompanies your copy of this report, as does a $750 check as required by Wisconsin Administrative Code NR 749. A copy of the closure documents is also included in Appendix A of this report.

Sincerely,

STS CONSULTANTS, LTD.

William F. Noel

William F. Noel, P.E.
Senior Project Engineer

Paula Leier-Engelhardt

Paula Leier-Engelhardt, P.G.
Senior Project Geologist

Mark A. Bergeon

Mark A. Bergeon, P.G.
Principal Geologist

WFN/ljs.wd

"I, Roger A. Miller, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Roger A. Miller

Roger A. Miller 10/9/98
Project Hydrogeologist

"I, William F. Noel, P.E., hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

William F. Noel

William F. Noel, P.E., 28909 PE. stamp
Senior Project Engineer

1035 Kepler Drive • Green Bay, WI 54311-8320 • (920) 468-1978 • (920) 468-3312 Fax

Copy: Mr. Ted Maloney
Carver Boat Corporation
790 Markham Drive
P.O. Box 1010
Pulaski, Wisconsin 54162

Mr. Jeffery Melby, P.E.
Genmar Holdings, Inc.
100 South Fifth Street, Suite 2400
Minneapolis, Minnesota 55402

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Site Name and Location

The site is owned by Carver Boat Corporation (Carver), Pulaski, Wisconsin. Underground storage tank (UST) #3 is located at the northeast corner of Carver's Plant 1, west of the railroad bed which bisects Carver's property. The site is in the NW 1/4 of the NW 1/4 of Section 5, T25N, R19E, Brown County, Wisconsin. The location of the Carver property is depicted on Figure 1, while Figure 2 shows the location of the former UST #3, and Figure 3 shows the area immediately around UST #3. These figures are in Appendix A.

1.2 Background

Carver UST #3 was removed by Phenco, Inc., of Neenah, Wisconsin on September 26, 1997. STS Consultants, Ltd., (STS) performed site assessments during removal of the UST. The UST #3 was a 6,000-gallon tank which formerly contained resin, of which, styrene was a primary constituent. The removal of this UST and the site assessment are documented in a report by STS dated February 26, 1998.

The presence of volatile organic compounds (VOCs) was not obvious based on field observations and direct screening. However, the VOCs styrene and xylenes were detected in one soil sample tested in a laboratory. Based on this information, Carver reported a release to the Wisconsin Department of Natural Resources (WDNR). The WDNR assigned BRRTS Case #02-05-178563 to this project.

STS then prepared a Work Plan dated February 26, 1998, on Carver's behalf to investigate soil and groundwater conditions in the vicinity of the one soil sample which showed impacts. Subsequent sections of this report present the methods and results of a subsurface investigation conducted in substantial accordance with this Work Plan.

2.0 METHODS OF INVESTIGATION

2.1 Soil Borings

STS advanced four soil borings (B-3-1 through B-3-4) with solid-stem auger on July 17, 1998. Soil Boring B-3-1 was advanced to a depth of 10 feet below ground surface (bgs), while the other three borings were advanced to a depth of 2.5 feet bgs. Soil Boring Log Information Forms for these borings are included in Appendix B.

2.1.1 Soil Sample Collection

Soil samples were collected from the top 2.5-foot interval in each boring. Sub-samples were field-screened with a flame ionization detector (FID). Sample collection and screening methods were as described in the Work Plan.

2.1.2 Soil Boring Abandonment

Soil Borings B-3-2 through B-3-4 were abandoned with bentonite in accordance with Wisconsin Administrative Code NR141. Abandonment forms are included in Appendix B. Boring B-3-1 was not abandoned due to the installation of a temporary monitoring well (refer to Section 2.2).

2.1.3 Soil Sample Analytical Testing

One sub-sample from each boring was submitted to U.S. Oil Company (U.S. Oil), Kimberly, Wisconsin, for analytical testing of styrene, xylenes, and total organic carbon (TOC). Samples were shipped to the laboratory on ice under Chain of Custody control.

2.2 Temporary Monitoring Well

2.2.1 Temporary Monitoring Well Installation

A temporary monitoring well was installed in Boring B-3-1. A 2-inch diameter Schedule 40 PVC screen was installed and protected with a 4-inch diameter flush-mount protector pipe. The temporary well will be abandoned upon determining that there is no further reason to collect groundwater samples from this location.

2.2.2 Groundwater Sample Collection

The temporary monitoring well was purged on August 13, 1998, by bailing dry two times. Groundwater samples were then collected on that date and submitted to U.S. Oil for testing of VOCs (including styrene), nitrate/nitrite, and sulfate in accordance with the Work Plan. Groundwater samples were also collected on that date and tested in the field. Parameters tested or noted were dissolved oxygen (DO), ferrous iron, pH, specific conductance, temperature, color, and odor.

3.0 RESULTS

3.1 Soil Borings

The locations of Borings B-3-1 through B-3-4 are shown on Figure 3. The soils were described in accordance with the Unified Soil Classification System (USCS). Beneath the pavement, the soil borings encountered light brown fine sandy silts to a depth of 2.5 feet bgs. Borings B-3-1 and B-3-4 then encountered evidence of dark brown organic silt at 2.5 feet bgs, while Boring B-3-2 encountered a red brown silty clay at this depth. Boring B-3-1 encountered light brown fine silty sand from 2.5 to 7.0 feet bgs, then brownish-red silty clay until the termination depth at 10.0 feet bgs. This information is also shown on the boring logs (Appendix B).

3.2 Field Data

A possible styrene odor was noted during advancement of Boring B-3-4, while no odor was noted at the other boring locations. The FID screening of soil samples produced readings greater than background. These data are shown on the boring logs and on Table 1 (Appendix A).

3.3 Soil Analytical Results

Soil analytical results from the tank closure site assessment and the subsurface investigation are summarized on Table 1 (Appendix A). Styrene concentrations greater than the method detection limit were reported in three of the four subsurface investigation samples tested, with the highest concentration being 1,900 micrograms per kilogram (µg/kg) at Boring B-3-1. The only reported detection of xylenes during the subsurface investigation was also at Boring B-3-1, where o-xylene was reported at 40 µg/kg. The TOC concentrations ranged from 810 to 5,710 milligrams per kilogram (mg/kg), with an average concentration of 3,588 mg/kg. The analytical test report is in Appendix C.

The total xylenes concentrations were in all cases substantially below the Wisconsin Administrative Code NR 720.09 residual contaminant level (RCL) for protection of groundwater of 4,100 µg/kg.

A styrene generic RCL for protection of groundwater has not been established in NR 720.09. STS has therefore calculated an RCL for styrene (4,400 µg/kg), using the algorithm presented in

the WDNR's "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) - Interim Guidance," dated April 1997. The calculation is in Appendix A. This calculation was made using a default value of 0.1% for TOC. The use of the average TOC value measured at this site (0.36%) would result in a still higher RCL.

STS also compared the reported styrene concentrations to site-specific direct contact RCLs calculated for soil ingestion and inhalation. The ingestion and inhalation RCLs for non-industrial soil were determined to be 3,100,000 µg/kg and 2,800,000 µg/kg, respectively. These RCLs are orders of magnitude greater than the concentrations detected. The direct contact RCLs for industrial sites are greater still. Site-specific direct contact RCLs were calculated based on algorithms presented in the WDNR's Interim PAH Guidance Document. These calculations are also included in Appendix A.

3.4 Groundwater Results

3.4.1 Groundwater Analytical Data

Groundwater analytical data from the temporary well in Boring B-3-1 are presented on Table 2 (Appendix A). The reported concentrations of styrene (27 µg/kg) and chloromethane (1.7 µg/kg) exceeded the respective Wisconsin Administrative Code NR 140 preventive action limits (PAL) of 10 and 0.3 µg/kg. No other PAL exceedances were reported. No exceedances of NR 140 enforcement standards were reported. The analytical test report is in Appendix C.

3.4.2 Groundwater Field Data

Groundwater field data are also presented on Table 2. A DO concentration of 2 milligrams per liter indicates that sufficient oxygen is present for aerobic degradation of the low level VOCs to proceed.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The concentration of contaminants in soil at this site do not exceed generic or site-specific RCLs. Additionally, groundwater in the area where the highest soil contaminant concentrations were reported has not exceeded any NR 140 enforcement standards.

Based on the collected data and observations, STS recommends that this site be closed by the WDNR with PAL exemptions for styrene and chloromethane per s. NR 140.28, Wisconsin Administrative Code. A WDNR Case Summary and Close Out Form is being submitted to the WDNR and a copy of this form is included in Appendix A of this report.

5.0 GENERAL QUALIFICATIONS

The conclusions and opinions presented are based on the samples collected, conditions at the time of sampling, and the chemical analyses performed by U.S. Oil. Environmental conditions are subject to change and variations may exist in both horizontal and vertical directions between sample locations.

This report represents STS's opinions and judgments and no warranty is either expressed or implied. The opinions presented are based on our understanding of current environmental standards in the state of Wisconsin. No representation is made or intended relative to any future standards or interpretation of existing standards.

APPENDIX A

Closure Documents

- Wisconsin Department of Natural Resources Case Summary and Close Out Form
- Case Summary and Justification for Closure

Tables

- Table 1 - Soil Field Observations and Laboratory Results
- Table 2 - Groundwater Data from Temporary Well B-3-1

Figures

- Figure 1 - Site Location Diagram
- Figure 2 - Facility Locations
- Figure 3 - UST #3 Soil Boring Location Diagram

RCL Calculation Sheets

- Styrene - Groundwater Pathway
- Styrene - Soil Ingestion Pathway
- Styrene - Soil Inhalation Pathway

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
CASE SUMMARY AND CLOSE OUT FORM

Form ____ - ___
Rev. 11/97

FOR DEPARTMENT USE ONLY

Type of Case: LUST Spill ER Act 453 Other_____ DNR Reviewer:_____

WDNR Site Name: Carver Boat Corporation Polyester/Styrene Contamination (Former Carver UST #3)

Complete Site Address: 790 Markham Drive, Pulaski, Wisconsin 54162

WDNR BRRTS Case #: 0 2 - 0 5 - 1 7 8 5 6 3 PECFA Claim #: _ _ _ _ _ _ - _ _ _ _ _ -

Responsible Party Name: Carver Boat Corporation

Complete Responsible Party Address: 790 Markham Drive, Pulaski, Wisconsin 54162

Site Legal Description: ____ 1/4, NW 1/4, NW 1/4, Sec 5, T 25 N, R 19 (E)W) Town: Pulaski

County: Brown Latitude: 44 ° 40 ' ___ ___.___" Longitude: 88 ° 13 ' 30 "

Type Of Closure Requested:

Soil
- X < NR 720.09/720.11 Generic RCLs
- ____ NR 720.19(2) Soil Performance Stds.
- X NR 720.19(3) Site Specific Stds.

Groundwater
- ____ < NR 140.10 Table 1 & Table 2 Values
- X NR 140.28(2) PAL Exemption
- ____ NR 726.05(2)(b) Natural Attenuation

Contaminant Type(s): Styrene and Xylenes Quantity Released: Unknown

Date of Incident/Discovery: September 26, 1997 Date Closure Submitted to DNR: 10/9/98

Enforcement Actions Closed Out? ____ Yes ____ No X NA Permits Closed Out? ____ Yes ____ No X NA

Form 4 Pending? ____ Yes X No ____ NA

I certify that, to the best of my knowledge, the information presented on and attached to this form are true and accurate. This recommendation for case closure is based upon all available data as of 10/9/98 (date). I have read the Case Summary and Close Out Form Instructions and all required information has been included.

Form completed by: William F. Noel 10/9/98

(Signature) (Date)

Printed Name: William F. Noel Firm Name: STS Consultants, Ltd.

Relationship to Site Owner: Consultant

Address: 1035 Kepler Drive, Green Bay, Wisconsin 54311

Telephone Number: 920-468-1978 FAX Number: 920-468-3312

Environmental Consultant (if different then above): _____

Address: _____

Telephone Number: _____ FAX Number: _____

WDNR BRRTS Case #: 02-05-178563 WDNR Site Name: Carver Boat Corp. Polyester/Styrene Contamination (Carver UST #3)

1. CASE HISTORY AND JUSTIFICATION FOR CLOSURE ATTACHED? X Yes _____ No

2. SOIL PRE-REMEDIATION OR INVESTIGATION ANALYTICAL RESULTS

Extent Defined? X Yes ____ No Soil Type(s): Sandy silt, silty sand, silty clay Depth to Bedrock: Not encountered.

Potential Receptors for Direct Contact (i.e. vapor migration, contaminated soil left in place): No identified exceedances of direct contact RCLs.

Attached:
Tables of Pre-remedial Analytical Results? X Yes ____ No Maps of Pre-remedial Sample Locations? X Yes ____No

3. SOIL POST REMEDIATION ANALYTICAL RESULTS

Remedial Action Completed? ____ Yes X No 720.19 Analysis? X Yes ____ No (If yes, attach supporting documentation)

Were Soils Excavated? _____ Yes X No Quantity: _____ Disposal Method: _____

Final Confirmation Sampling Methods: _____

Soil Disposal Form Attached? ____ Yes _No X NA Final Disposal Location: _____

Estimated volume of insitu soils exceeding NR 720 RCLs: None
Attached:
Tables of Post-Remedial Analytical Results? _Yes/No X NA Maps of Post-Remedial Sample Locations? _Yes/No X NA

Brief Description of Remedial Action Taken:
NR 720.19 Analysis

4. GROUNDWATER ANALYTICAL RESULTS

Potential Receptors for Groundwater Migration Pathway: No identified exceedances of NR 140 ESs.

Extent of Contamination Defined? X Yes ____ No____ NA Remedial Action Completed? ____ Yes _____ No X NA

# of Sample Rounds: 1 Depth(s) to Groundwater/Flow Direction(s): 4' BGS/flow likely to north.

Field Analyses? X Yes ____ No Lab Analyses? X Yes ____No # of Sampling Points: 1

NR 141 Monitoring Wells Sampled: 0 # Temporary Groundwater Sampling Points Sampled: 1

Recovery Sumps Sampled: 0 # Municipal Wells Sampled: 0 # Private Wells Sampled: 0

Has DNR Been Notified of Substances in Groundwater w/o Standard? _____Yes _____No X NA

Any Potable Wells Within 1,200 Feet of Site? ____ Yes X No If Yes, How Many? _____

Have They Been Sampled? ____ Yes ____No Have Well Owners/Occupants Been Notified of Results? ____Yes ____No

Preventive Action Limit Exceeded? X Yes ____ No (If Yes, identify location(s): B-3-1

Enforcement Standard Exceeded? _____ Yes X No (If Yes, identify location(s): _____
Attached:
Tables of Analytical Results? X Yes ____ No Map of Groundwater Sample Location Map? X Yes ____ No

Brief Description of Remedial Action Taken:
Compared data to NR 140 Standards.

WDNR BRRTS Case #: 02-05-178563 WDNR Site Name: Carver Boat Corporation, Polyester/Styrene Contamination (Carver UST #3)

FOR DEPARTMENT USE ONLY

FIRST REVIEW DATE:_____ **[ ] Approved [ ] Denied**

_____ _____ _____ _____
(Signature) (Signature) (Signature) (Signature)

SECOND REVIEW DATE:_____ **[ ] Approved [ ] Denied**

_____ _____ _____ _____
(Signature) (Signature) (Signature) (Signature)

COMMITTEE RECOMMENDATION:

_____ **Closure Approved Per:**
- _____ No Restrictions
- _____ Groundwater Use Restriction
- _____ Zoning Verification
- _____ Deed Restriction
- _____ Deed Affidavit
- _____ Site Specific Close Out Letter Necessary
- _____ Well Abandonment Documentation
- _____ Soil Disposal Documentation
- _____ Public Notice Needed
- _____ NR 140 Exemption For:_____

_____ Specific Comments:_____

_____

_____

_____

_____ **Closure Denied, Needs More:**
- _____ Investigation
- _____ Groundwater Monitoring
- _____ Soil Remediation
- _____ Groundwater Remediation
- _____ Documentation Of Soil Landspreading Or Biopile Destiny
- _____ Specific Comments:_____

_____

_____

_____

CASE HISTORY AND JUSTIFICATION FOR CLOSURE
CARVER BOAT CORPORATION
POLYESTER/STYRENE CONTAMINATION
(FORMER CARVER UST #3)
PULASKI, WISCONSIN
BRRTS #02-05-178563

Carver Boat underground storage tank (UST) #3 was removed September 26, 1997. The presence of volatile organic compounds (VOCs) was not obvious based on field observations and direct screening. However, the VOCs styrene and xylenes were detected in one soil sample tested in a laboratory. Based on this information, Carver reported a release to the Wisconsin Department of Natural Resources (WDNR).

STS Consultants, Ltd., (STS) advanced four soil borings on July 17, 1998. A temporary monitoring well was installed in the boring located closest to the tank closure soil sample in which impacts were noted.

Soil testing for xylenes did not result in any detections exceeding the Wisconsin Administrative Code NR 720.09 residual contaminant level (RCL) based on protection of groundwater for xylenes of 4,100 micrograms per kilogram (µg/kg). Likewise, soil testing for styrene did not result in any detections exceeding site-specific RCLs calculated by STS. Site-specific RCLs (for non-industrial sites) were calculated to be:

- Protection of groundwater: 4,400 µg/kg
- Soil ingestion: 3,100,000 µg/kg
- Soil inhalation: 2,800,000 µg/kg

A groundwater sample collected from the temporary monitoring well was reported to contain styrene and chloromethane at concentrations exceeding the respective Wisconsin Administrative Code NR 140 preventive action limits (PALs), but not exceeding NR 140 enforcement standards (ES). No other PAL exceedances were reported.

STS, therefore, recommends that the site be closed by the WDNR on the basis of soil contaminant concentrations being less than RCLs determined using NR 720.09 and NR 720.19, and on groundwater concentrations being less than NR 140 ES.

TABLE 1
SOIL FIELD OBSERVATIONS AND LABORATORY RESULTS
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

(Samples collected July 17, 1998)

Tank Closure Site Assessment Samples

Sample Location	Depth (feet)	Soil Description	Odor	FID (units)	Styrene (µg/kg)	Xylenes (µg/kg)	TOC (µg/kg)
SS-1	3	Brown Fine to Medium Silty Sand	None Noted	<1	<25	<75	-
SS-2	3	Brown Fine to Medium Silty Sand	None Noted	<1	-	-	-
SS-3	3	Brown Fine to Medium Silty Sand	None Noted	<1	<25	<75	-
SS-4	2.5	Brown Fine to Medium Silty Sand	None Noted	<1	830	<78[1]	-
SS-5	2.5	Brown Fine to Medium Silty Sand	None Noted	<1	-	-	-
SS-6	2.5	Brown Fine to Medium Silty Sand	None Noted	<1	<25	<75	-

Subsurface Investigation Samples

Sample Location	Depth (feet)	Soil Description	Odor	FID (units)	Styrene (µg/kg)	Xylenes (µg/kg)	TOC (µg/kg)
B-3-1	0.5 - 2.5	Light Brown Fine Silty Sand	None Noted	75	1900	<90[2]	5710
B-3-2	0.5 - 2.5	Light Brown Fine Silty Sand	None Noted	2	440	<75	4270
B-3-3	0.5 - 2.5	Light Brown Fine Silty Sand	None Noted	3	<25	<75	3560
B-4-3	0.5 - 2.5	Light Brown Fine Silty Sand	Possible Styrene	30	250	<75	810

Notes:

VOCs not listed were not detected in any sample
FID = Flame Ionization Detector
- = Not Analyzed
TOC = Total Organic Carbon

[1]m & p - xylene detected at 53 µg/kg
[2]o - xylene detected at 40 µg/kg

TABLE 2
GROUNDWATER DATA FROM TEMPORARY WELL B-3-1
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

(Samples collected August 13, 1998)

Field Parameters

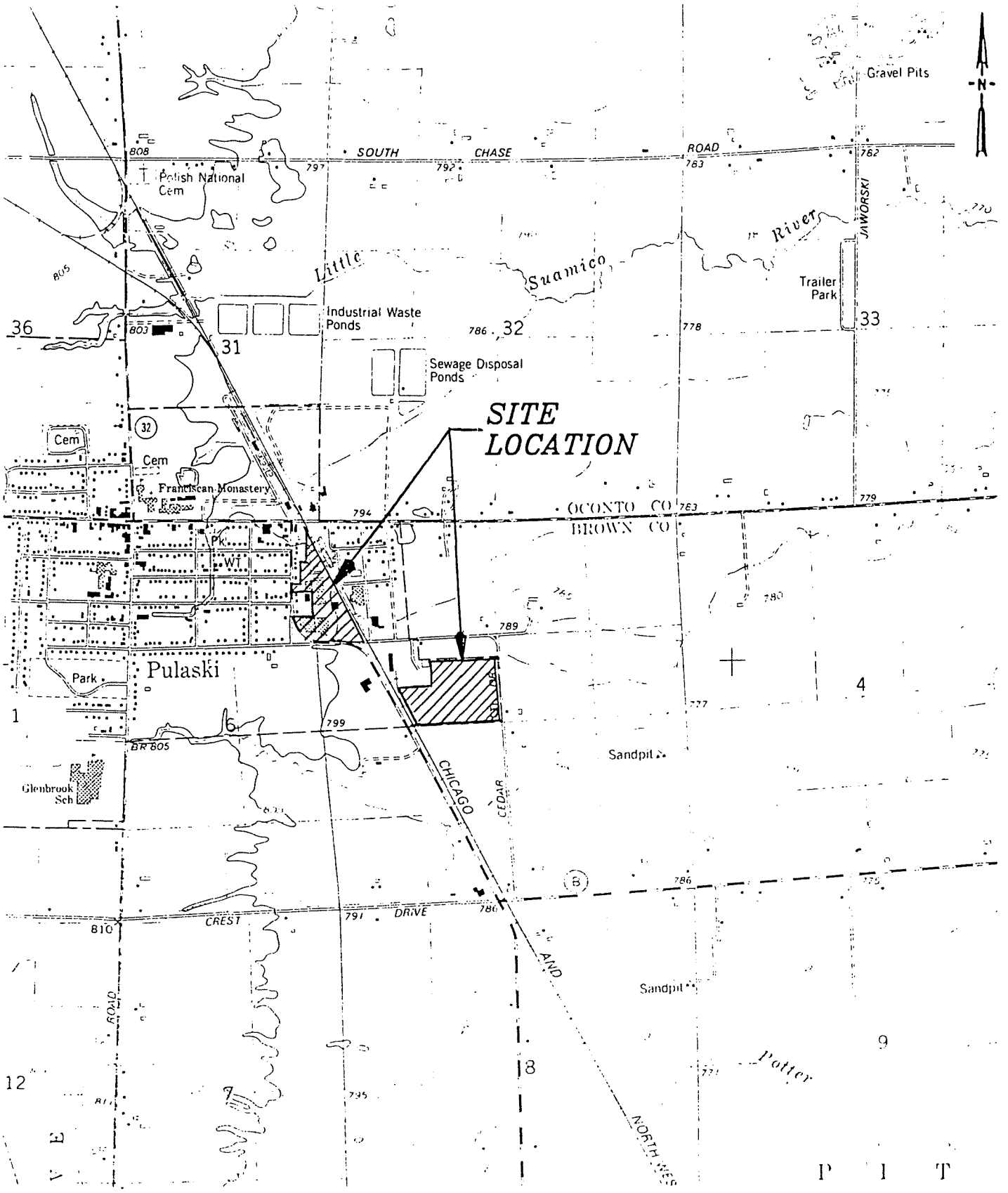
Depth to Water (Ft from TPVC)	Dissolved Oxygen (mg/L)	Ferrous Iron (mg/L)	pH (units)	Specific Conductance (µmhos/cm)	Temperature (°F)	Color	Odor Noted
3.63	2	0	6.18	849	73	Clear	None Noted

Analytical Results

	VOCs* (µg/L)								Nitrate/ Nitrite (mg/L)	Sulfate (mg/L)
	Acetone	Benzene	Chloroethane	Chloromethane	1,1-Dichloroethane	Ethylbenzene	Isopropylbenzene	Styrene		
Test Result	3.0	1.0	1.0	1.7	1.3	43	2.1	27	<0.014	25
NR 140 ES	1000	5.0	400	3.0	850	700	NE	100		
NR 140 PAL	200	0.5	80	0.3	85	140	NE	10		

*VOCs not listed were not detected

NE: Not established



MAP SOURCE: MODIFIED FROM PULASKI, WIS. U.S.G.S. QUADRANGLE DATED 1974.

STS Consultants Ltd.
Consulting Engineers

SITE LOCATION DIAGRAM
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY	[illegible]	3-24-98
CADFILE G479F001	SCALE 1"=2000'	
STS PROJECT NO. 23379XF	FIGURE NO. 1	

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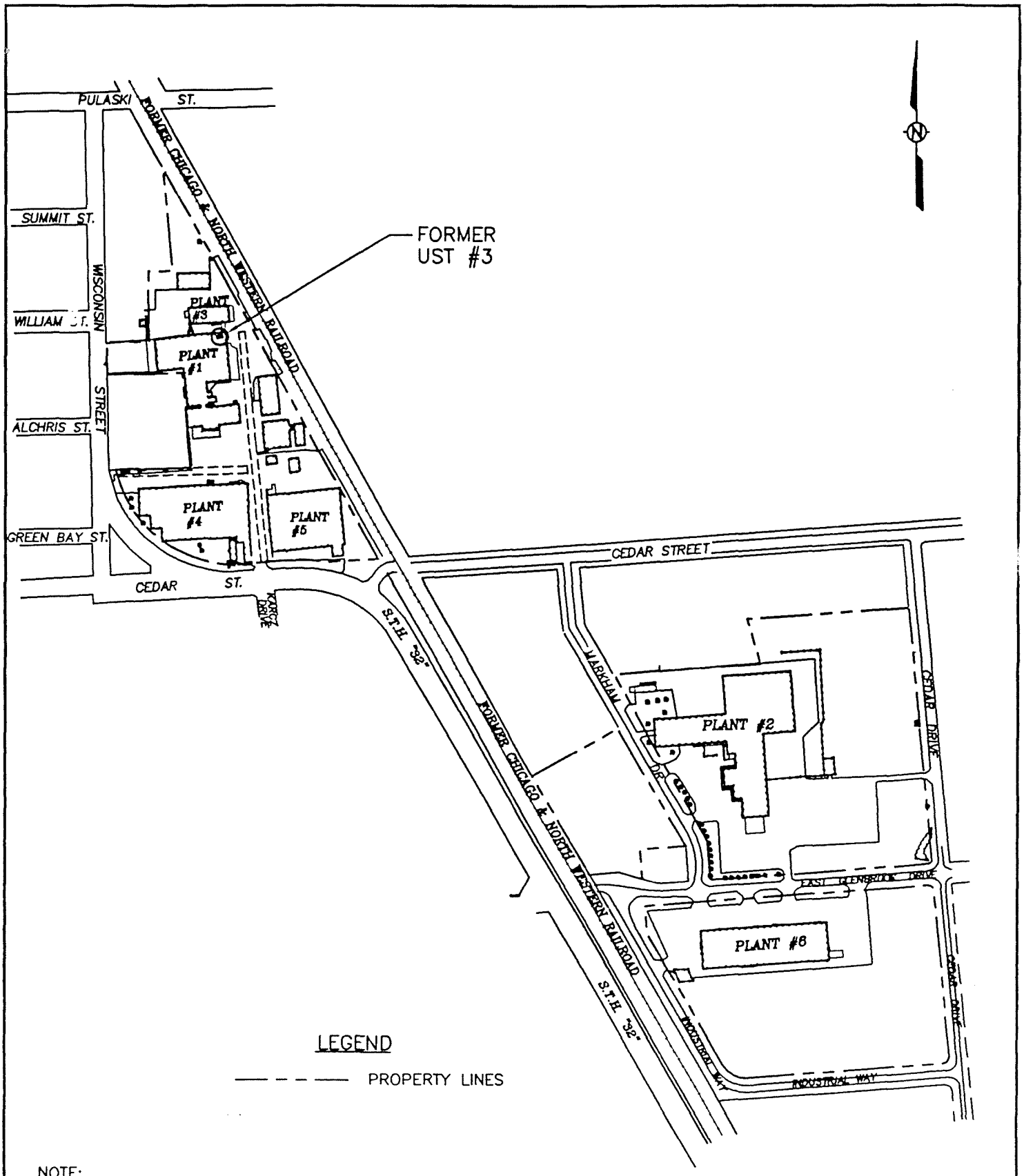
02/23/1998 15:14



NOTE:
MAP MODIFIED FROM DRAWINGS FROM ROBERT E. LEE AND ASSOC.

STS Consultants Ltd.
Consulting Engineers

FACILITY LOCATIONS
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY	PDP	2-24-98
CADFILE G479F01	SCALE 1"=500'	
STS PROJECT NO. 23379XF	FIGURE NO. 2	

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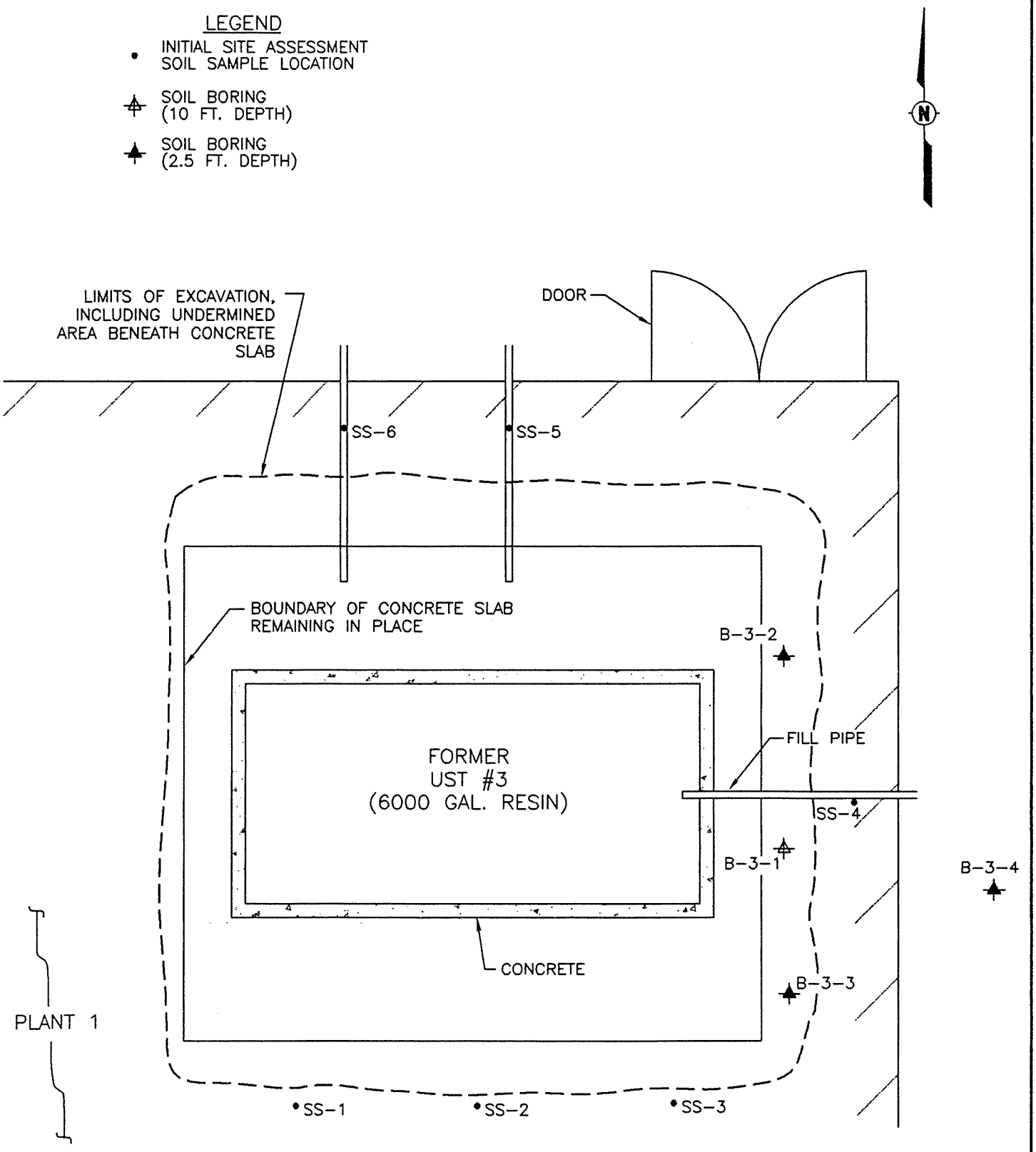
02/24/1998 09:55



STS Consultants Ltd.
Consulting Engineers

UST #3 SOIL BORING LOCATION DIAGRAM
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	R.A.B.	8-12-98
CHECKED BY	W.F.N.	8-12-98
APPROVED BY		
CADFILE	SCALE 1"=5'	
STS PROJECT NO. 23379XA	FIGURE NO. 3	

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08/12/1998 10:05

Carver Boat Corporation UST #3

Pulaski, Wisconsin

Styrene--Groundwater Pathway

Site-Specific Residual Contaminant Level Calculation

Paramete	Value	Units	Description	Source
K_{oc}	776	L/kg	Organic Carbon Partition Coefficient	EPA Soil Screening Guidance[1]
f_{oc}	**0.001**	g/g	Fraction Organic Carbon Content	WDNR Default Value*
K_d	0.8	L/kg	Soil:Water Distribution Coefficient	K_{oc} x f_{oc}
θ	0.2	cm^3-H_20/cm^3-soil	Volumetric Water Content, Vadose Zone Soils	WDNR Default Value
n	0.43	cm^3-void/cm^3-soil	Porosity	WDNR Default Value
d	152.4	cm	Groundwater Mixing Zone Thickness	WDNR Default Value
R	25.4	cm	Annualized Groundwater Recharge Rate	WDNR Default Value
ρ_b	1.5	g-soil/cm^3-soil	Soil Bulk Density	WDNR Default Value
PAL	10	µg/L	Preventive Action Limit	NR 140
ES	100	µg/L	Enforcement Standard	NR 140

Calculate Site-Specific Residual Contaminant Level (RCL)

$$DAF = d/R\theta \times (K_d \times \rho_b + n)$$

DAF 48 Dilution Attenuation Factor

$$RCL_{ES} = ES \times 10^{-3}_{mg/\mu g} \times (K_d + \theta/\rho_b) \times DAF$$

RCL_{ES} **4.4** mg/kg **Styrene** Site-Specific Residual Contaminant Level using ES

Calculated by: Roger Miller 10/9/98

Checked by: WFN 10/9/98

Notes:

1) Site-Specific Residual Contaminant Level (RCL) equation and default values from WDNR Publication RR-519-97, "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs)--Interim Guidance" (April 1997).

2) NR 140 Groundwater Enforcement Standard (ES) and Preventive Action Limit (PAL) from s. NR140.10, Wisconsin Administrative Code (October 1996).

3) [1]USEPA, 1996, Soil Screening Guidance: Technical Background Document: Publication EPA/540/R-95/128, Washington, D. C.

4) *WNDR default foc value was used even though the average TOC concentration exceeded this amount by a factor of 3.5.

Styrene

Soil Ingestion Pathway (RfD)

Carver Boat Corporation

Pulaski, Wisconsin

Algorithm for Ingestion of Noncarcinogenic Contaminants in Non-Industrial (Residential) Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	0.2	WDNR Default Value
BWc - Average Body Weight for Child (kg)	15	WDNR Default Value
AT - Averaging Time (years)	6	WDNR Default Value
RfDo - Oral Reference Dose (mg/kg-day)	2.00E-01	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	350	WDNR Default Value
EDc - Exposure Duration During Ages 1-6 (year)	6	WDNR Default Value
IRc - Ingestion Rate of Soil Age 1-6 (mg/day)	200	WDNR Default Value

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ x BWc x AT x 365 day/year}}{\text{1/RfDo x } 10^{-6} \text{ kg/mg x EF x EDc x IRc}} = \boxed{3100}$$

Algorithm for Ingestion of Noncarcinogenic Contaminants in Industrial Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	1	WDNR Default Value
BWa - Average Body Weight For Adult (kg)	70	WDNR Default Value
AT - Averaging Time (years)	25	WDNR Default Value
RfDo - Oral Reference Dose (mg/kg-day)	2.00E-01	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	250	WDNR Default Value
ED - Exposure Duration (year)	25	WDNR Default Value
IRa - Ingestion Rate for Adult (mg/day)	100	WDNR Default Value

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ x BWa x AT x 365 day/year}}{\text{1/RfDo x } 10^{-6} \text{ kg/mg x EF x ED x IRa}} = \boxed{204000}$$

Calculated by: Roger Miller 9/17/98

Checked by: WFN 9/22/98

Note:

[1]USEPA, 1996, Soil Screening Guidance: Technical Background Document: Publication EPA/540/R-95/128, Washington, D. C.

Styrene
Soil Inhalation Pathway (RfC)

Carver Boat Corporation
Pulaski, Wisconsin

Algorithm for Inhalation of Noncarcinogenic Contaminants from Non-Industrial (Residential) Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	0.2	WDNR Default Value
AT - Averaging Time (years)	30	WDNR Default Value
RfC - Reference Concentration (mg/m^3)	1.0E+00	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	350	WDNR Default Value
ED - Exposure Duration (year)	30	WDNR Default Value
VF - Volatilization Factor (kg/m^3)	1.34E+04	Calculation
Cp - Concentration of Particles less than 10 μm ($\mu g/m^3$)	1.4	WDNR Default Value

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ} \times \text{AT} \times 365\ \text{day/year}}{1/\text{RfC} \times \text{EF} \times \text{ED} \times [(1/\text{VF}) + (\text{Cp} \times 10^{-9}\ \text{kg}/\mu\text{g})]} = \boxed{2800}$$

Algorithm for Inhalation of Noncarcinogenic Contaminants in Industrial Soil

Parameter	Value	Source
THQ - Target Hazard Quotient (unitless)	1	WDNR Default Value
AT - Averaging Time (years)	25	WDNR Default Value
RfC - Reference Concentration (mg/m^3)	1.0E+00	EPA Soil Screening Guidance[1]
EF - Exposure Frequency (day/year)	250	WDNR Default Value
ED - Exposure Duration (year)	25	WDNR Default Value
IRc - Inhalation Rate Correction for Adult Laborer (unitless)	1.2	WDNR Default Value
VF - Volatilization Factor (kg/m^3)	1.34E+04	Calculation
Cp - Concentration of Particles less than 10 μm ($\mu g/m^3$)	1.4	WDNR Default Value

$$\text{Residual Contaminant Level (mg/kg)} = \frac{\text{THQ} \times \text{AT} \times 365\ \text{day/year}}{1/\text{RfC} \times \text{EF} \times \text{ED} \times \text{IRc} \times [(1/\text{VF}) + (\text{Cp} \times 10^{-9}\ \text{kg}/\mu\text{g})]} = \boxed{16000}$$

$$\text{Volatilization Factor } (m^3/kg) = \frac{Q/C \times (3.14 \times D_A \times T)^{1/2} \times 10^{-4}\ m^2/cm^2}{2 \times \rho_b \times D_A} = \boxed{1.34E+04}$$

$$D_A\ (cm^2/sec) = \frac{[(\theta_a^{10/3} D_a H' + \theta_w^{10/3} D_w)/n^2]}{\rho_b K_d + \theta_w + \theta_a H'} = \boxed{8.70E-05}$$

Parameter	Value	Source
Q/C - Inverse Mean Concentration at Center of Source (g/m^2-sec)/(kg/m^3)	68.81	WDNR Default Value
D_A - Apparent Diffusivity (cm^2/sec)	8.70E-05	Calculation
T - Exposure Intervals (sec)	9.50E+08	WDNR Default Value
ρ_b - Soil Dry Bulk Density (g/cm^3)	1.5	WDNR Default Value
θ_a - Air Filled Porosity (cm^3/cm^3)	0.28	WDNR Default Value
D_a - Air Diffusion Coefficient (cm^2/sec)	7.10E-02	EPA Soil Screening Guidance[1]
H' - Henry's Law Constant (unitless)	1.13E-01	EPA Soil Screening Guidance[1]
θ_w - Volumetric Soil Moisture Content (cm^3/cm^3)	0.15	WDNR Default Value
D_w - Water Diffusion Coefficient (cm^2/sec)	8.00E-06	EPA Soil Screening Guidance[1]
n - Total Soil Porosity (cm^3/cm^3)	0.43	WDNR Default Value
K_d - Soil:Water Distribution Coefficient (L/kg)	4.66	Koc x foc
K_{oc} - Organic Carbon:Water Partitioning Coefficient (L/kg)	776	EPA Soil Screening Guidance[1]
f_{oc} - Soil Fraction Organic Carbon (g/g)	0.006	WDNR Default Value (for Inhalation Route only)

Calculated by: Roger Miller 9/17/98

Checked by: WFN 9/22/98

Note:

[1]USEPA, 1996, Soil Screening Guidance: Technical Background Document: Publication EPA/540/R-95/128, Washington, D. C.

APPENDIX B

Soil Borings Logs and Abandonment Forms

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other

Soil Boring Log Information
Form 4400-122 Rev. 5-92

DNR Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Carver Boat Corporation Plant 1		**B-3-1**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
STS Consultants Ltd. - B. Vande Hey - STS Project No. 23379XA	**07/17/98**	**07/17/98**	**Solid-Stem Auger**

Facility Well No.	Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	**4.0** Inches

Boring Location
State Plane N, E Lat ° ' "
NW 1/4 of **NW** 1/4 of Section **5** T **25** N, R **19** E Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Brown	**05**	**Pulaski**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	1.5		2	Fill: Concrete Fill: Light brown fine silty sand - dark brown organic silt at 2.5 feet				75						SS
			4 6 8	(Fill: Light brown fine silty sand to 7.0 feet - brownish red silty clay - soil classified from auger cuttings)										
			10	End of Boring Boring advanced from 0.0 feet to 10.0 feet by solid-stem auger Installed 2-inch diameter Schedule 40 PVC temporary monitoring well at 10.0 feet										

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

Signature William F. Noel djp23379

Firm STS Consultants, Ltd.
1035 Kepler Drive, Green Bay, Wisconsin
Tel: 920-468-1978, Fax: 920-468-3312

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other

Soil Boring Log Information

Form 4400-122 Rev. 5-92

DNR Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Carver Boat Corporation Plant 1		**B-3-2**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
STS Consultants Ltd. - B. Vande Hey - STS Project No. 23379XA	**07/17/98**	**07/17/98**	**Solid-Stem Auger**

Facility Well No.	Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	**4.0** Inches

Boring Location
State Plane N, E Lat ° ' "
NW 1/4 of **NW** 1/4 of Section **5** T **25** N, R **19** E Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Brown	**05**	**Pulaski**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	1.0		2	Fill: Concrete Fill: Light brown fine silty sand - brownish red silty clay at 2.5 feet End of Boring Boring advanced from 0.0 feet to 0.5 feet by solid-stem auger Boring abandoned with bentonite				2						SS

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

Signature William F. Noel
djp23379

Firm STS Consultants, Ltd.
1035 Kepler Drive, Green Bay, Wisconsin
Tel: 920-468-1978, Fax: 920-468-3312

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State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other

Soil Boring Log Information
Form 4400-122 Rev. 5-92

DNR Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Carver Boat Corporation Plant 1		**B-3-3**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
STS Consultants Ltd. - B. Vande Hey - STS Project No. 23379XA	**07/17/98**	**07/17/98**	**Solid-Stem Auger**

Facility Well No.	Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	**4.0** Inches

Boring Location
State Plane N, E Lat ° ' "
NW 1/4 of **NW** 1/4 of Section **5** T **25** N, R **19** E Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Brown	**05**	**Pulaski**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	0.5		2	Fill: Concrete Fill: Light brown fine silty sand				3						SS
				End of Boring Boring advanced from 0.0 feet to 0.5 feet by solid-stem auger Boring abandoned with bentonite										

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

Signature William F. Noel
djp23379

Firm STS Consultants, Ltd.
1035 Kepler Drive, Green Bay, Wisconsin
Tel: 920-468-1978, Fax: 920-468-3312

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State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Superfund ☐ Other

Soil Boring Log Information
Form 4400-122 Rev. 5-92

DNR Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Carver Boat Corporation Plant 1		**B-3-4**

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
STS Consultants Ltd. - B. Vande Hey - STS Project No. 23379XA	**07/17/98**	**07/17/98**	**Solid-Stem Auger**

Facility Well No.	Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	**4.0** Inches

Boring Location
State Plane N, E Lat ° ' "
NW 1/4 of **NW** 1/4 of Section **5** T **25** N, R **19** E Long ° ' "

Local Grid Location (If applicable)
☐ N ☐ E
Feet ☐ S Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Brown	**05**	**Pulaski**

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	2.0		2	Fill: Asphalt Fill: Light brown fine silty sand - dark brown organic silt at 2.5 feet - possible styrene odor End of Boring Boring advanced from 0.0 feet to 0.5 feet by solid-stem auger Boring abandoned with bentonite				30						SS

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

Signature William F. Vande Hey djp23379

Firm STS Consultants, Ltd.
1035 Kepler Drive, Green Bay, Wisconsin
Tel: 920-468-1978, Fax: 920-468-3312

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 3-94

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

(1) GENERAL INFORMATION 23379XA

Well/Drillhole/Borehole Location: B-3-2
County: Brown

NW 1/4 of NW 1/4 of Sec. 5 ; T. 25 N; R. 19 ☒ E ☐ W
(If Applicable)
_____ Gov't Lot _____ Grid Number
Grid Location
_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.
Civil Town Name: Pulaski
Street Address of Well: 790 Markham Drive
City, Village: Pulaski

(2) FACILITY NAME Carver Boat Corporation Plant 4

Original Well Owner (If Known): Carver Boat Corporation
Present Well Owner: Same
Street or Route: 790 Markham Drive
City, State, Zip Code: Pulaski, Wisconsin 54162
Facility Well No. and/or Name (If Applicable): B-3-2
WI Unique Well No.:
Reason For Abandonment: Completed Sampling
Date of Abandonment: 07/17/98

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 07/17/98

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) _____ (From groundsurface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) N/A

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	

If No, Explain _____

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☐ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conducter Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Material Used To Fill Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	2.5	1/4 bag	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work
STS Consultants, Ltd.

Signature of Person Doing Work: [signature]
Date Signed: 8-4-98
Street or Route: 1035 Kepler Drive
Telephone Number: 920-468-1978
City, State, Zip Code: Green Bay, Wisconsin 54311

djp23379

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 3-94

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

(1) GENERAL INFORMATION 23379XA

Well/Drillhole/Borehole Location: B-3-3

County: Brown

NW 1/4 of NW 1/4 of Sec. 5 ; T. 25 N; R. 19 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name: Pulaski

Street Address of Well: 790 Markham Drive

City, Village: Pulaski

(2) FACILITY NAME Carver Boat Corporation Plant 4

Original Well Owner (If Known): Carver Boat Corporation

Present Well Owner: Same

Street or Route: 790 Markham Drive

City, State, Zip Code: Pulaski, Wisconsin 54162

Facility Well No. and/or Name (If Applicable): B-3-3

WI Unique Well No.:

Reason For Abandonment: Completed Sampling

Date of Abandonment: 07/17/98

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 07/17/98

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) _____ (From groundsurface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) N/A

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	

If No, Explain _____

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☐ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conducter Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Material Used To Fill Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	2.5	1/4 bag	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: STS Consultants, Ltd.

Signature of Person Doing Work: Jim Malay
Date Signed: 9-4-98

Street or Route: 1035 Kepler Drive
Telephone Number: 920-468-1978

City, State, Zip Code: Green Bay, Wisconsin 54311

djp23379

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 3-94

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

(1) GENERAL INFORMATION 23379XA

Well/Drillhole/Borehole Location: B-3-4

County: Brown

NW 1/4 of NW 1/4 of Sec. 5 ; T. 25 N; R. 19 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name: Pulaski

Street Address of Well: 790 Markham Drive

City, Village: Pulaski

(2) FACILITY NAME Carver Boat Corporation Plant 4

Original Well Owner (If Known): Carver Boat Corporation

Present Well Owner: Same

Street or Route: 790 Markham Drive

City, State, Zip Code: Pulaski, Wisconsin 54162

Facility Well No. and/or Name (If Applicable): B-3-4

WI Unique Well No.:

Reason For Abandonment: Completed Sampling

Date of Abandonment: 07/17/98

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 07/17/98

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) _____

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) _____ (From groundsurface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) N/A

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☐ No	

If No, Explain _____

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☐ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conducter Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Material Used To Fill Well/Drillhole	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	2.5	1/4 bag	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: STS Consultants, Ltd.

Signature of Person Doing Work: [signature]
Date Signed: 9-4-98

Street or Route: 1035 Kepler Drive
Telephone Number: 920-468-1978

City, State, Zip Code: Green Bay, Wisconsin 54311

djp23379

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

APPENDIX C

Soil and Groundwater Analytical Reports

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 03-Aug-98

Project #: 23379XA
Project : CARVER BOAT CORP
Sample ID: B-3-1
Lab Code: 5022230A
Sample Type: Soil
Sample Date: 17-Jul-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	92.1			%		22-Jul-98	JHL	1
TOTAL ORGANIC CARBON								
SW846 9060M	5710	8.8		MG/KG		27-Jul-98	Robert E. Lee	1
VOC								
SW846 8260						22-Jul-98	CJR	
Styrene	1900	5.9	20	UG/KG	1			1
m & p-Xylene	< 50	5.6	19	UG/KG	1			1
o-Xylene	40	2.7	9	UG/KG	1			1
Toluene-d8 Surrogate	100			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 03-Aug-98

Project #: 23379XA
Project : CARVER BOAT CORP
Sample ID: B-3-2
Lab Code: 5022230B
Sample Type: Soil
Sample Date: 17-Jul-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	93.1			%		22-Jul-98	JHL	1
TOTAL ORGANIC CARBON								
SW846 9060M	4270	7.3		MG/KG		27-Jul-98	Robert E. Lee	1
VOC								
SW846 8260						22-Jul-98	CJR	
Styrene	440	5.9	20	UG/KG	1			1
m & p-Xylene	< 50	5.6	19	UG/KG	1			1
o-Xylene	< 25	2.7	9	UG/KG	1			1
Toluene-d8 Surrogate	100			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 03-Aug-98

Project #: 23379XA
Project : CARVER BOAT CORP
Sample ID: B-3-3
Lab Code: 5022230C
Sample Type: Soil
Sample Date: 17-Jul-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	85.1			%		22-Jul-98	JHL	1
TOTAL ORGANIC CARBON								
SW846 9060M	3560	9.3		MG/KG		27-Jul-98	Robert E. Lee	1
VOC								
SW846 8260						22-Jul-98	CJR	
Styrene	< 25	5.9	20	UG/KG	1			1
m & p-Xylene	< 50	5.6	19	UG/KG	1			1
o-Xylene	< 25	2.7	9	UG/KG	1			1
Toluene-d8 Surrogate	100			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 03-Aug-98

Project #: 23379XA
Project : CARVER BOAT CORP
Sample ID: B-3-4
Lab Code: 5022230D
Sample Type: Soil
Sample Date: 17-Jul-98

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	86.8			%		22-Jul-98	JHL	1
TOTAL ORGANIC CARBON								
SW846 9060M	810	9.3		MG/KG		27-Jul-98	Robert E. Lee	1
VOC								
SW846 8260						22-Jul-98	CJR	
Styrene	250	5.9	20	UG/KG	1			1
m & p-Xylene	< 50	5.6	19	UG/KG	1			1
o-Xylene	< 25	2.7	9	UG/KG	1			1
Toluene-d8 Surrogate	100			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

CHAIN OF CUSTODY RECORD 5022230 № 21196

Contact Person BILL NOEL
Phone No. 920-468-1978 Office G.B.
Project No. 23379XA PO No.
Project Name CARVER BOAT CORP

Special Handling Request
- ☐ Rush
- ☐ Verbal
- ☐ Other

RECORD NUMBER 1 THROUGH 1
Laboratory U.S. OIL
Contact Person CHRIS ZABEL
Phone No.
Results Due LCS

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 Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
5022230	1998													
A B-3-1	7/17		X		3	SOIL	X	X					XYLENES/STYRENE (8260), TOC, % SOLID	
B B-3-2														
C B-3-3														
D B-3-4														

Collected by: Jim Calloway	Date 7.17.98	Time 6:00P	Delivery by:	Date	Time
Received by: Dee Hess	Date 7-21-98	Time 7:45	Relinquished by: Dee Hess	Date 7-21-98	Time 1:50
Received by:	Date	Time	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received for lab by: [illegible]	Date 7/21/98	Time 1:50	Relinquished by:	Date	Time

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

Final Disposition:	Comments (Weather Conditions, Precautions, Hazards):
	QUOTE # Q2899

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

9/94cp10k

STS Consultants Ltd.
Consulting Engineers

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 01-Sep-98

Project #: 23379XA
Project : Carver Boat Corp
Sample ID: B-3-1
Lab Code: 5022497A
Sample Type: Water
Sample Date: 13-Aug-98

Test	Result	LOD	LOQ	Unit	pH	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
NITROGEN (NITRATE/NITRITE)									
EPA 300.0	< 0.014	0.014	0.05	MG/L	0.8	10	17-Aug-98	TJW	1
SULFATE									
EPA 300.0	25	0.024	0.079	MG/L	7.5	1	21-Aug-98	TJW	1

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

Method 8260 Volatile Organic Compounds

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 01-Sep-98
Analyzed By: CJR

Project #: 23379XA
Project : Carver Boat Corp
Sample ID: B-3-1
Lab Code: 5022497A
Sample Type: Water
Sample Date: 13-Aug-98
Date Analyzed: 24-Aug-98

ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
Acetone	3	0.28	0.93	1
Benzene	1	0.25	0.85	1
Bromobenzene	< 0.23	0.23	0.77	1
Bromodichloromethane	< 0.25	0.25	0.84	1
n-Butylbenzene	< 0.43	0.43	1.4	1
sec-Butylbenzene	< 0.37	0.37	1.2	1
tert-Butylbenzene	< 0.4	0.4	1.3	1
Carbon Tetrachloride	< 0.48	0.48	1.6	1
Chlorobenzene	< 0.26	0.26	0.87	1
Chloroethane	1	0.15	0.51	1
Chloroform	< 0.26	0.26	0.87	1
Chloromethane	1.7	0.29	1	1
2-Chlorotoluene	< 0.31	0.31	1	1
4-Chlorotoluene	< 0.27	0.27	0.91	1
1,2-Dibromo-3-Chloropropane	< 0.51	0.51	1.7	1
Dibromochloromethane	< 0.31	0.31	1	1
1,2-Dichlorobenzene	< 0.28	0.28	0.93	1
1,3-Dichlorobenzene	< 0.34	0.34	1.1	1
1,4-Dichlorobenzene	< 0.26	0.26	0.87	1
Dichlorodifluoromethane	< 0.54	0.54	1.8	1
1,1-Dichloroethane	1.3	0.32	1.1	1
1,2-Dichloroethane	< 0.14	0.14	0.48	1
1,1-Dichloroethene	< 0.61	0.61	2	1
cis-1,2-Dichloroethene	< 0.34	0.34	1.1	1
trans-1,2-Dichloroethene	< 0.46	0.46	1.5	1
1,2-Dichloropropane	< 0.26	0.26	0.86	1
1,3-Dichloropropane	< 0.23	0.23	0.76	1

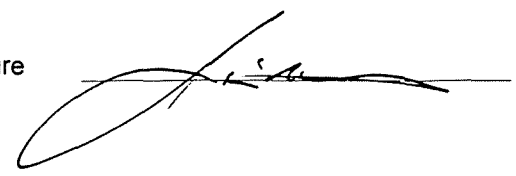
ANALYTE	RESULT	LOD UG/L	LOQ UG/L	Dilution Factor
2,2-Dichloropropane	< 0.53	0.53	1.8	1
Di-Isopropyl ether	< 0.21	0.21	0.69	1
Ethylbenzene	43	0.32	1.1	1
EDB (1,2-Dibromoethane)	< 0.24	0.24	0.82	1
Hexachlorobutadiene	< 0.33	0.33	1.1	1
Isopropylbenzene	2.1	0.33	1.1	1
p-Isopropyltoluene	< 0.34	0.34	1.1	1
Methylene chloride	< 1	1	3.3	1
MTBE	< 0.21	0.21	0.69	1
Naphthalene	< 0.73	0.73	2.4	1
n-Propylbenzene	< 0.36	0.36	1.2	1
Styrene	27	0.75	2.5	1
1,1,2,2-Tetrachloroethane	< 0.29	0.29	1	1
Tetrachloroethene	< 0.56	0.56	1.9	1
Toluene	0.57 "J"	0.38	1.3	1
1,2,3-Trichlorobenzene	< 0.16	0.16	0.54	1
1,2,4-Trichlorobenzene	< 0.17	0.17	0.57	1
1,1,1-Trichloroethane	< 0.35	0.35	1.2	1
1,1,2-Trichloroethane	< 0.2	0.2	0.66	1
Trichloroethene	< 0.39	0.39	1.3	1
Trichlorofluoromethane	< 0.52	0.52	1.7	1
1,2,4-Trimethylbenzene	< 0.34	0.34	1.1	1
1,3,5-Trimethylbenzene	< 0.36	0.36	1.2	1
Vinyl Chloride	< 0.32	0.32	1.1	1
m&p-Xylene	0.71 "J"	0.67	2.2	1
o-Xylene	0.68 "J"	0.37	1.2	1

Dibromofluoromethane Sur	103	% Rec.
1,2-Dichloroethane-d4 Sur	89	% Rec.
Toluene-d8 Sur	87	% Rec.
4-Bromofluorobenzene Sur	82	% Rec.

LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch # 120237
Sample pH 1.7

GCMS #12

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8260 Volatile Organic Compounds

Project #: 23379XA
Sample ID: B-3-1
Report Date: 01-Sep-98
Lab Code: 5022497A

ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	INT STD AREA %	METHOD BLANK	LCS SPIKE	MATRIX SPIKE	MATRIX SPIKE RPD
Acetone	P	P	P	P	P	P	P
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	P	P	P	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	F	F	P
1,2-Dibromo-3-Chloropropane	P	P	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	P	P	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-Dichloropropane	P	P	P	P	P	P	P
Di-isopropyl Ether	P	F	P	P	F	F	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
Styrene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	P	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	P	P	P	P
1,2,4-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	P	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

SPCC 1,1-Dichloroethane	P
SPCC 1,1,2,2-Tetrachloroethane	P
SPCC Bromoform	P
SPCC Chlorobenzene	P
SPCC Chloromethane	P

QC Batch # 120237
F = Failed QC limits.
P = Passed QC limits.
NA = Not Applicable

Authorized Signature

CHAIN OF CUSTODY RECORD 5022497 № 21115

Contact Person BILL NOEL
Phone No. 970-468-1978 Office G.B.
Project No. 23379XA PO No.
Project Name CAUER BOAT CORP.

Special Handling Request
- ☐ Rush
- ☐ Verbal
- ☐ Other

RECORD NUMBER 1 THROUGH 1
Laboratory ~~ENVIROSCAN~~ U S OIL
Contact Person ~~SHARON MALTBY~~ CHRIS ZABEL
Phone No.
Results Due
(CJ)

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 Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
022497	1998													
A B-3-1	8/13		X		5	WATER	X	X					[VOC (INCLUDING STYRENE) BY 8260], SULFATE, NITRATE/NITRITE	
B MW-4-1					7								VOC BY 8021, PAH BY 8310, SULFATE, NITRATE/NITRITE	
C MW-4-2					7									
D B-6-1					5								[VOC (INCLUDING ACETONE & STYRENE) BY 8260], SULFATE,	
E B-6-2													NITRATE/NITRITE	
F B-6-3														
G B-6-4														
H B-6-5														

Collected by:		Date 8-13-98	Time 2.00P	Delivery by:	Date	Time
Received by:	Leo Huss	Date 8-14-98	Time 7:30	Relinquished by: Leo Huss	Date 8-14-98	Time 1:55
Received by:		Date	Time	Relinquished by:	Date	Time
Received by:		Date	Time	Relinquished by:	Date	Time
Received for lab by	Linda Smith	Date 8-14-98	Time 1:55	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt? ☒ Yes ☐ No ☐ N/A Rec on ice & good cond

Final Disposition:	Comments (Weather Conditions, Precautions, Hazards):
	QUOTE # 9 2899

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

9/94cp10k

STS Consultants Ltd.
Consulting Engineers

February 26, 1998

RECEIVED
MAR 02 1998
LMD SOLID WASTE

Mr. Ted Maloney
Carver Boat Corporation
790 Markham Drive
P.O. Box 1010
Pulaski, Wisconsin 54162

Re: Underground Storage Tank Closure Report for Carver Boat Corporation, UST #3 at Plant 1, 790 Markham Drive, Pulaski, Wisconsin – BRRTS Case #02-05-178563 – STS Project No. 23379XF

Dear Mr. Maloney:

STS Consultants, Ltd., (STS) is pleased to submit this report documenting the removal of one 6,000-gallon resin underground storage tank (UST) at Plant 1, located at Carver Boat Corporation, 790 Markham Drive, Pulaski, Wisconsin.

This report summarizes activities conducted at Carver Boat Corporation, and outlines procedures followed for documenting soil conditions around the UST. Based on the presence of styrene and xylenes detected in one soil sample, we recommend further subsurface investigation. In accordance with Wisconsin Administrative Code ILHR 10, copies of this report are being sent to the Wisconsin Department of Commerce (Madison) and the Wisconsin Department of Natural Resources (Green Bay).

STS appreciates the opportunity to provide environmental services and looks forward to working with you in the future. Please contact us at 920-468-1978 with any questions or comments concerning this report.

Sincerely,

STS CONSULTANTS, LTD.

James L. Calaway
Senior Environmental Technician

William F. Noel, P.E.
Senior Project Engineer

JLC/kjw.wd

STS Consultants Ltd.
Consulting Engineers

1035 Kepler Drive
Green Bay, Wisconsin 54311-8320
920.468.1978/Fax 920.468.3312

Copy to: Wisconsin Department of Commerce
ERS Division
Bureau of Storage Tank Regulation
P.O. Box 7969
Madison, Wisconsin 53707-7969

Ms. Roxanne Nelezen Chronert
Spill Coordinator - Hydrogeologist
Wisconsin Department of Natural Resources
1125 North Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448

C(C479F001)

TABLE OF CONTENTS

TABLE

LIST OF FIGURES

LIST OF APPENDICES

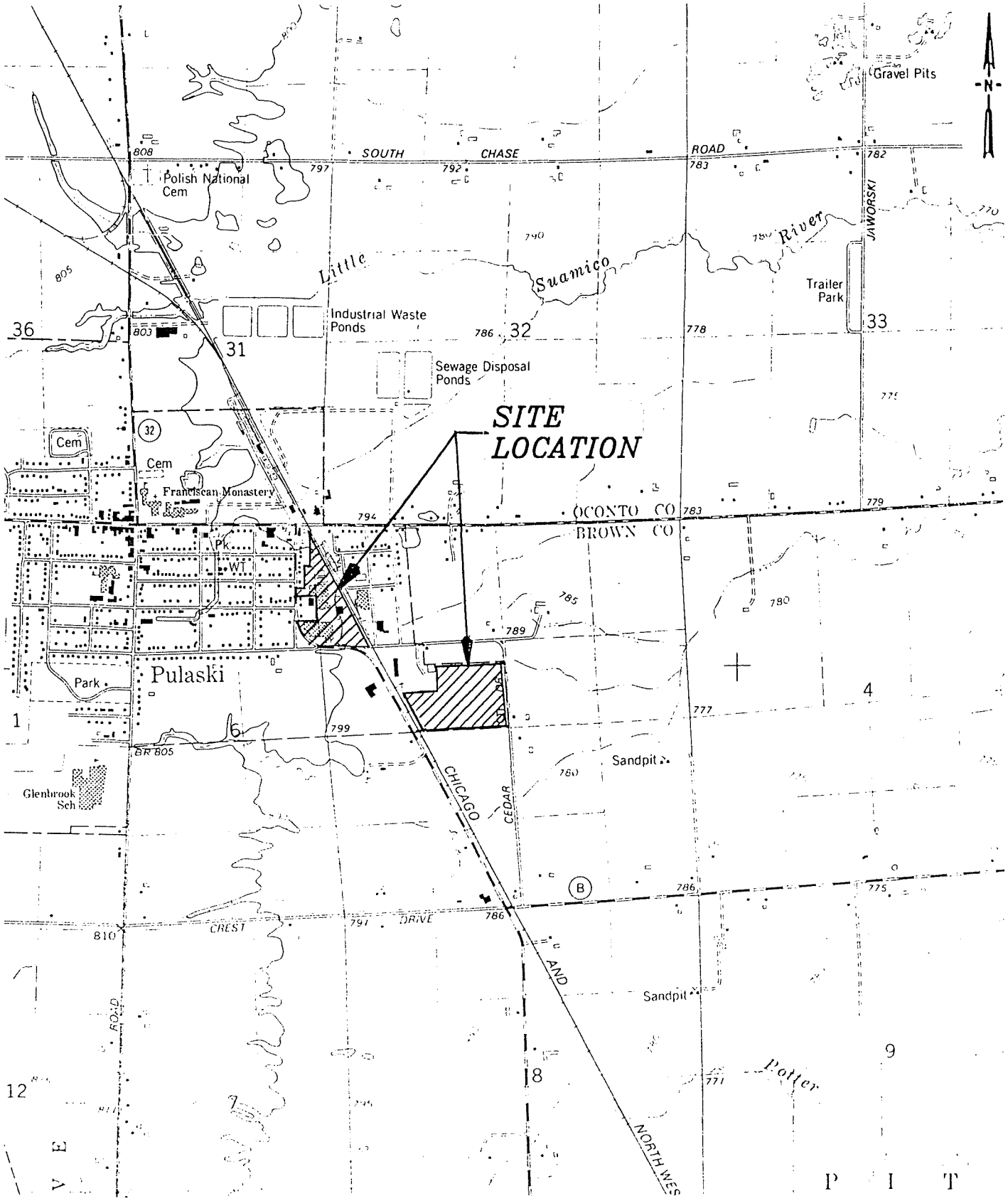
UNDERGROUND STORAGE TANK CLOSURE REPORT
UST #3 AT PLANT NO. 1
CARVER BOAT CORPORATION
PULASKI, WISCONSIN
STS PROJECT NO. 23379XF – FEBRUARY 1998

1.0 INTRODUCTION

One 6,000-gallon resin underground storage tank (UST) located at Carver Boat Corporation (Carver), 790 Markham Drive, Pulaski, Wisconsin, (NW 1/4 of NW 1/4 of Section 5, T25N, R19E, Brown County, Wisconsin) was decommissioned by excavation and removed on September 26, 1997. Figure 1 shows the location of the Carver facility. UST #3 (Wisconsin Department of Commerce [WDCOMM] No. 051100591) was located within the northeast corner of Plant 1. Figure 2 portrays the entire Carver facility, while Figure 3 shows the localized area around UST #3. The contractor responsible for tank decommissioning was Phenco Inc., (Phenco) of Neenah, Wisconsin. Mr. John Wolters (Certification No. 01019) was the certified remover/cleaner. Phenco was responsible for purging, inerting, and cleaning the UST.

STS Consultants, Ltd., (STS) was retained by Carver to perform sampling, analysis, and documentation required for the closure assessment and to summarize conditions in a closure documentation report. Mr. James L. Calaway of STS (Certification No. 248261) was the certified site assessor and was present throughout the tank removal.

Inspector Robert E. Dunks (Certification No. 35003) of the Allouez Fire Department was notified prior to the planned tank closure. Inspector Dunks was present at the project site during portions of the work.



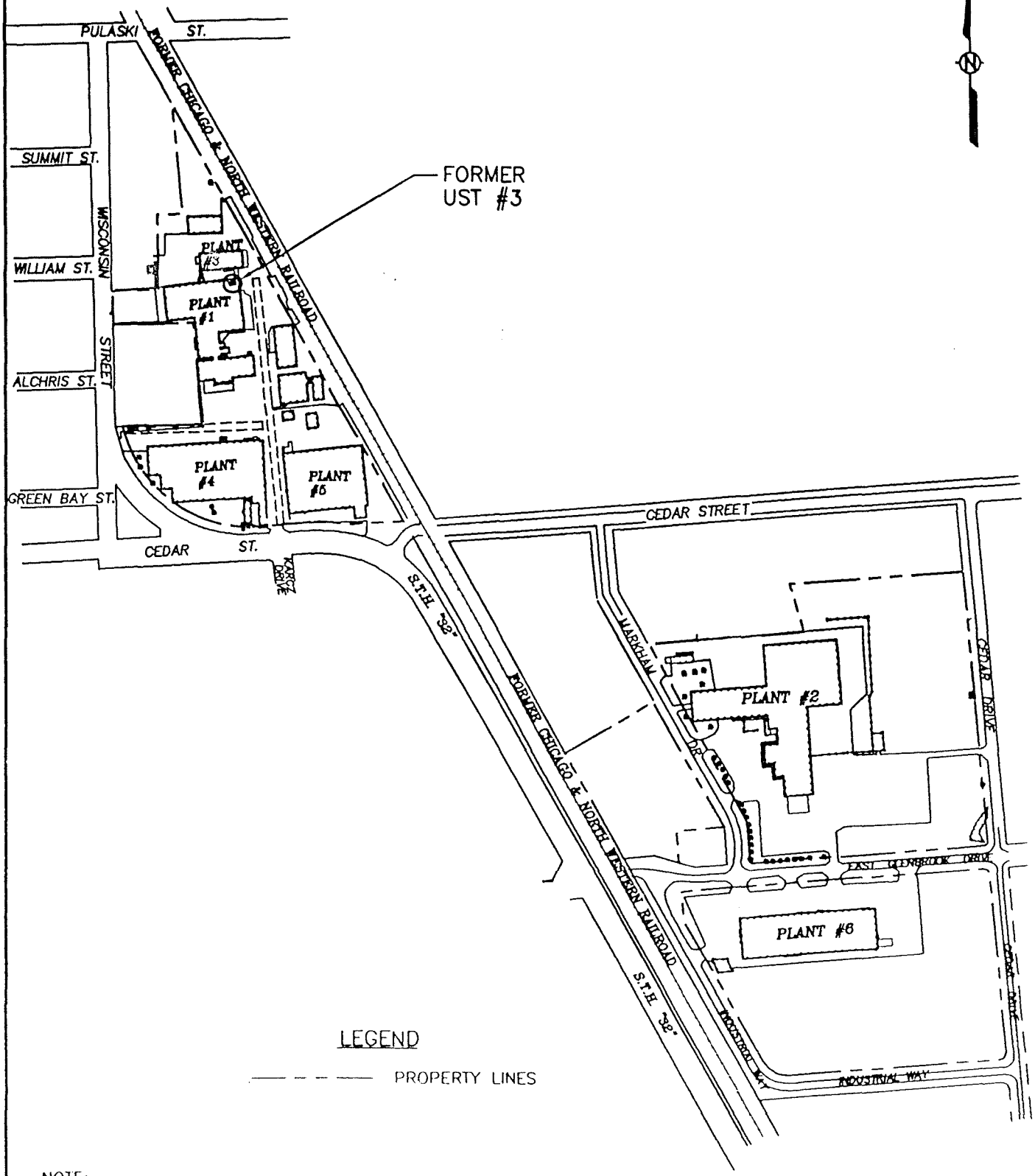
MAP SOURCE: MODIFIED FROM PULASKI, WIS. U.S.G.S. QUADRANGLE DATED 1974.

STS Consultants Ltd.
Consulting Engineers

SITE LOCATION DIAGRAM
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY		
CADFILE G479F001	SCALE 1"=2000'	
STS PROJECT NO. 23379XF	FIGURE NO. 1	

W:\DWG97\23379\XF\G479F001
02/23/1998 15:14



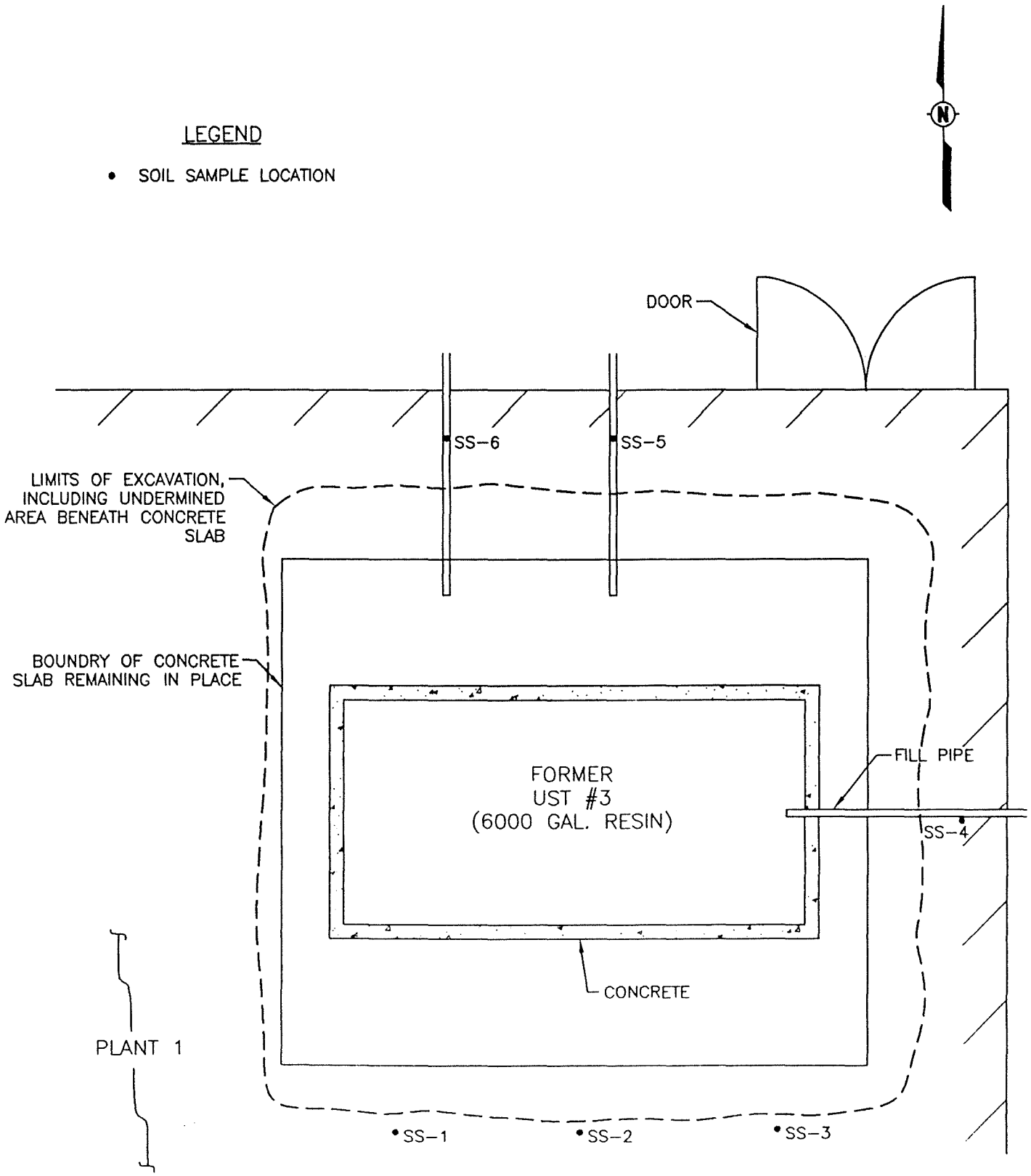
NOTE:
MAP MODIFIED FROM DRAWINGS FROM ROBERT E. LEE AND ASSOC.

STS Consultants Ltd.
Consulting Engineers

FACILITY LOCATIONS
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY	PDP	2-24-98
CADFILE G479F01	SCALE 1"=500'	
STS PROJECT NO 23379XF	FIGURE NO. 2	

W:\DW\97\23379\XF\G479F01
02/24/1998 09:55



STS Consultants Ltd.
Consulting Engineers

UST #3 LOCATION DIAGRAM
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	R.A.B.	12-23-97
CHECKED BY	W.F.N.	2-23-98
APPROVED BY		
CADFILE	SCALE 1"=5'	
STS PROJECT NO. 23379XF	FIGURE NO 3	

W: \DWG97\23379\XF\G437902A
02/23/1998 15:01

2.0 PROCEDURES AND SITE CONDITIONS

Water inside UST #3 was removed and treated by Carver prior to Phenco beginning work. The water had reportedly been placed inside the tank by Carver personnel. Samples of this water were submitted to the U.S. Oil Company (U.S. Oil) Laboratory in Kimberly, Wisconsin, under Chain of Custody control for volatile organic compounds (VOCs) testing, including styrene. The proper disposal is discussed later in this section.

On September 26, 1997, Phenco removed the concrete slab and excavated around the immediate exterior of UST #3 prior to lifting it from the excavation. Phenco monitored the atmosphere in the UST and surrounding area for combustible gases. At the time of the UST removal, no holes, deterioration, or cracks were observed in the bare steel tank. No impacts to groundwater were observed.

Soil sample collection was performed on the day of the UST removal. The STS site assessor collected soil samples at a depth of 2.5 feet to 3.0 feet below ground surface (bgs), above the apparent groundwater table which was approximately 4.5 feet bgs. Soil descriptions are provided on Table 1. Soil sample locations are shown on Figure 2. Portions of the soil samples were placed in sealed containers for field screening with a flame ionization detector (FID). Other portions of selected soil samples were transferred into laboratory containers. The laboratory containers were placed in an ice-filled cooler for transportation to U.S. Oil. The samples were submitted under Chain of Custody control for testing of VOCs including styrene by Method 8260 (styrene is a primary constituent of the resin formerly stored in UST #3).

The UST excavation was backfilled with silty sand, including the soil excavated in order to remove the USTs, and compacted with the backhoe bucket and a vibratory plate compactor. Phenco cut up the UST for transport to Sadoff Iron and Metal (Sadoff), Green Bay, Wisconsin. A copy of the Tank Disposal Form signed by a Sadoff representative is included in Appendix A.

Carver previously submitted an Underground Petroleum Product Tank Inventory form (ERS-7437) and a Checklist for Underground Tank Closure (ERS-8951) to WDCOMM under separate cover. Copies of these forms are included in Appendix B.

On the basis of analytical test results from U.S. Oil, water pumped from UST #3 by Carver was approved for sanitary sewer disposal following aeration treatment. Ms. Lynda Bentley of the Green Bay Metropolitan Sewerage District gave this approval. Carver utilized equipment furnished by STS to aerate the water prior to discharge to a sanitary sewer inlet on Carver property.

TABLE 1
SOIL FIELD OBSERVATIONS AND LABORATORY RESULTS
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

Sample Location	Depth (feet)	FID (units)	Soil Description	Odor	Styrene (µg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Xylenes (µg/kg)	MTBE (µg/kg)
SS-1	3	<1	Brown Fine to Medium Silty Sand	No	<25	<25	<25	<25	<75	<25
SS-2	3	<1	Brown Fine to Medium Silty Sand	No	-	-	-	-	-	-
SS-3	3	<1	Brown Fine to Medium Silty Sand	No	<25	<25	<25	<25	<75	<25
SS-4	2.5	<1	Brown Fine to Medium Silty Sand	No	830	<25	<25	<25	53	<25
SS-5	2.5	<1	Brown Fine to Medium Silty Sand	No	-	-	-	-	-	-
SS-6	2.5	<1	Brown Fine to Medium Silty Sand	No	<25	<25	<25	<25	<75	<25

Notes:

FID = Flame Ionization Detector
- = Not Analyzed
VOCs not listed were not detected in any sample

3.0 SOIL TEST RESULTS

FID screening produced readings of less than one unit in all soil samples.

On October 10, 1997, U.S. Oil reported the analytical results of the soil samples recovered adjacent to UST #3. Laboratory testing indicated that styrene and xylenes were present in Sample SS-4 (collected under the fill pipe). Styrene and xylenes were detected at 830 micrograms per kilogram (µg/kg) and 53 µg/kg, respectively. No other VOCs were detected in any sample. Analytical data are presented in tabular form on Table 1. The U.S. Oil report is included in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

One 6,000-gallon resin UST was decommissioned by removal. The steel tank was observed to be in good condition with no holes or pitting reported. Styrene and xylenes were reported in one soil sample collected from under the fill pipe, providing evidence that a release had occurred. We therefore recommend further subsurface investigation.

5.0 GENERAL QUALIFICATIONS

Conditions and conclusions presented in this report are based on site observations and results of field and laboratory tests performed on collected soil samples. The scope of this report is limited to the specific project and locations described herein. Our description of the project represents our understanding of the significant aspects relative to subsurface conditions. This information should not be used for purposes other than intended.

APPENDIX A

Tank Disposal Form

Received 2-27-98

February 26, 1998

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

Re: Work Plan to Investigate Soil and Groundwater Impacts, Former Underground Storage Tank #3, Carver Boat Corporation, 790 Markham Drive, Pulaski, Wisconsin - BRRTS Case #02-05-178563 – STS Project No. 23379XA

Dear Ms. Nelezen Chronert:

STS Consultants, Ltd., was retained by Carver Boat Corporation to prepare the attached Work Plan to investigate soil and groundwater impacts at this location. This Work Plan was prepared in accordance with Wisconsin Administrative Code NR 716.09.

Sincerely,

STS CONSULTANTS, LTD.

William F. Noel

William F. Noel, P.E.
Senior Project Engineer

Paula Leier-Engelhardt

Paula Leier-Engelhardt, P.G.
Senior Project Geologist

"I, Calvin D. Taylor, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Calvin D Taylor

Calvin D. Taylor 2/26/98
Project Hydrogeologist

WFN/slc.wd

Copy to: Mr. Ted Maloney
Carver Boat Corporation
790 Markham Drive
P.O. Box 1010
Pulaski, Wisconsin 54162

(C479A002)

STS Consultants Ltd.
Consulting Engineers

1035 Kepler Drive
Green Bay, Wisconsin 54311-8320
920.468.1978/Fax 920.468.3312

TABLE OF CONTENTS

FIGURES

TABLE

WORK PLAN TO INVESTIGATE SOIL AND GROUNDWATER IMPACTS VICINITY OF FORMER UST #3 CARVER BOAT CORPORATION PULASKI, WISCONSIN STS PROJECT NO. 23379XA – FEBRUARY 1998

1.0 INTRODUCTION

1.1 Site Name and Location

The site is owned by Carver Boat Corporation (Carver), Pulaski, Wisconsin. Underground Storage Tank (UST) #3 is located at the northeast corner of Carver's Plant 1, west of the railroad bed which bisect Carver's property. The site is in the NW ¼ of the NW ¼ of Section 5, T25N, R19E, Brown County, Wisconsin. The location of the Carver property is depicted on Figure 1.

1.2 Responsible Party and Consultant

The site owner is:

Carver Boat Corporation
790 Markham Drive
P.O. Box 1010
Pulaski, Wisconsin 54162
Attention: Mr. Ted Maloney
Telephone: 920-822-9000, Ext. 266

The consultant preparing the Work Plan is:

STS Consultants, Ltd.
1035 Kepler Drive
Green Bay, Wisconsin 54311
Attention: Mr. William F. Noel, P.E.
Telephone: 920-468-1978, Ext. 145

1.3 Background

Carver UST #3 was removed by Phenco, Inc., of Neenah, Wisconsin on September 26, 1997. STS performed site assessments during removal of the USTs. UST #3 was a 6,000-gallon tank which formerly contained resin, of which, styrene was a primary constituent. The removal of this UST and the site assessment are documented in a report by STS dated February 26, 1998. Figure 2 shows Carver's entire facility, while Figure 3 shows the area immediately surrounding UST #3.

The presence of volatile organic compounds (VOCs) was not obvious based on field observations and direct screening. However, the VOCs styrene and xylene were detected in one soil sample tested in a laboratory. Table 1 summarizes field and laboratory data. Based on this information, Carver reported a release to the Wisconsin Department of Natural Resources (WDNR). No groundwater samples were collected while the UST was being removed, nor was there evidence of groundwater impacts.

Carver retained STS to prepare this Work Plan for further work at this site. This Work Plan has been prepared in accordance with Wisconsin Administrative Code NR 716.09. Relevant items addressed in NR 716.07 were evaluated to ensure that the scope and detail of the proposed field investigation were appropriate to the complexity of the site.

1.4 Geologic and Hydrogeologic Setting

The site is located in a relatively level area at approximately 800 feet above mean sea level. Soil conditions noted during the USTs removal included brown silty sand. Soil conditions do vary across the facility, ranging from silty sand to silt to sandy clay, to silty clay.

Groundwater appeared to be approximately 4.5 feet below ground surface (bgs) during the UST removals. Prior work in the site vicinity was reviewed, and indicated that the horizontal groundwater gradient is relatively flat. The Little Suamico River is located approximately one mile to the north and may affect groundwater flow. The village of Pulaski Municipal Well No. 2 is located approximately 2,600 feet southeast of former UST #3. STS understands that this well was constructed in 1975 to a depth of 700 feet and has a capacity of 1,000 gallons per minute.

2.0 SCOPE OF WORK

2.1 Soil

STS will advance one soil boring with a hydraulic probe to a depth of 10 feet, and three more to a depth of 2.5 feet. The borings will be advanced to determine the degree and extent of soil and groundwater VOC impacts. The vertical extent of impact will be evaluated by collecting one soil sample from the top 2.5-foot interval in each boring. Locations of the previously collected soil samples and proposed hydraulic probes are shown on Figure 3.

2.1.1 Soil Sample Collection

Soils samples will be field-screened with a flame ionization detector (FID). A quart-sized glass jar will be half-filled with a soil sample, then covered by aluminum foil and a metal screw-on lid. After the sample reaches ambient temperature, the metal lid will be removed and the FID probe will be inserted through the aluminum foil into the headspace in the jar. The highest stable FID value will be recorded. A portion of a soil sample collected above the water table will be used for analytical testing.

2.1.2 Soil Sample Analysis

One sample collected from each probe will be submitted to U.S. Oil Company (U.S. Oil), Kimberly, Wisconsin, a Wisconsin-certified laboratory, for analysis of styrene and xylenes, in accordance with EPA Method 8260. This sample will be placed in a tared jar containing methanol, for preservation. An additional soil sample from each probe will be submitted for total organic carbon testing, in order to have data available for calculation of site-specific residual contaminant levels as addressed in NR 720.19, if appropriate for this project. Soil samples collected for analytical testing will be shipped on ice under Chain of Custody control.

2.2 Groundwater

2.2.1 Hydraulic Probe -- Groundwater Sample Collection

A ¾-inch diameter, Schedule 40, screened length of PVC will be installed into the 10-foot-deep hydraulic probe boring. The PVC screen will be purged, then sampled, with a disposable bailer. The PVC screen will be left in place after the sampling until test results are received, to allow for collection of additional samples if appropriate. Upon removal of the screen, the boring will be filled with bentonite and hydrated, with concrete or asphalt at the surface.

2.2.2 Monitoring Wells -- Groundwater Sample Collection

If groundwater analytical results warrant it, additional hydraulic probes and/or groundwater monitoring wells will be installed with monitoring wells installed in accordance with NR 141 requirements. Locations will be determined following the hydraulic probe work. Well screens will be installed to intersect the apparent water table at the time of well installation. Groundwater samples will be collected no sooner than seven days after well development.

2.2.3 Groundwater Sample Analysis

Groundwater samples from the hydraulic probe(s) and, if necessary, the monitoring wells, will be collected and submitted to U.S. Oil for analytical testing for VOCs, including styrene, in accordance with EPA Method 8260. Indicators of natural attenuation will also be tested, including laboratory testing for nitrate (EPA Method 353.2) and sulfate (Method SW846-9038), and field testing for dissolved oxygen and ferrous iron (Chemetrics ampoules). Groundwater samples will be collected with disposable sampling devices to minimize or avoid potential for

cross-contamination. Groundwater samples for VOC testing will be placed in 40-milliliter, hydrochloric acid-preserved vials with zero headspace. Samples will be shipped on ice under Chain of Custody control.

2.3 Quality Assurance and Quality Control

Quality assurance and quality control procedures implemented for this project will be consistent with items specified in NR 716.13 and those outlined in PUBL-SW-130 93, "Leaking Underground Storage Tank and Petroleum, Analytical and Quality Assurance Guidance, Wisconsin Department of Natural Resources," July 1993.

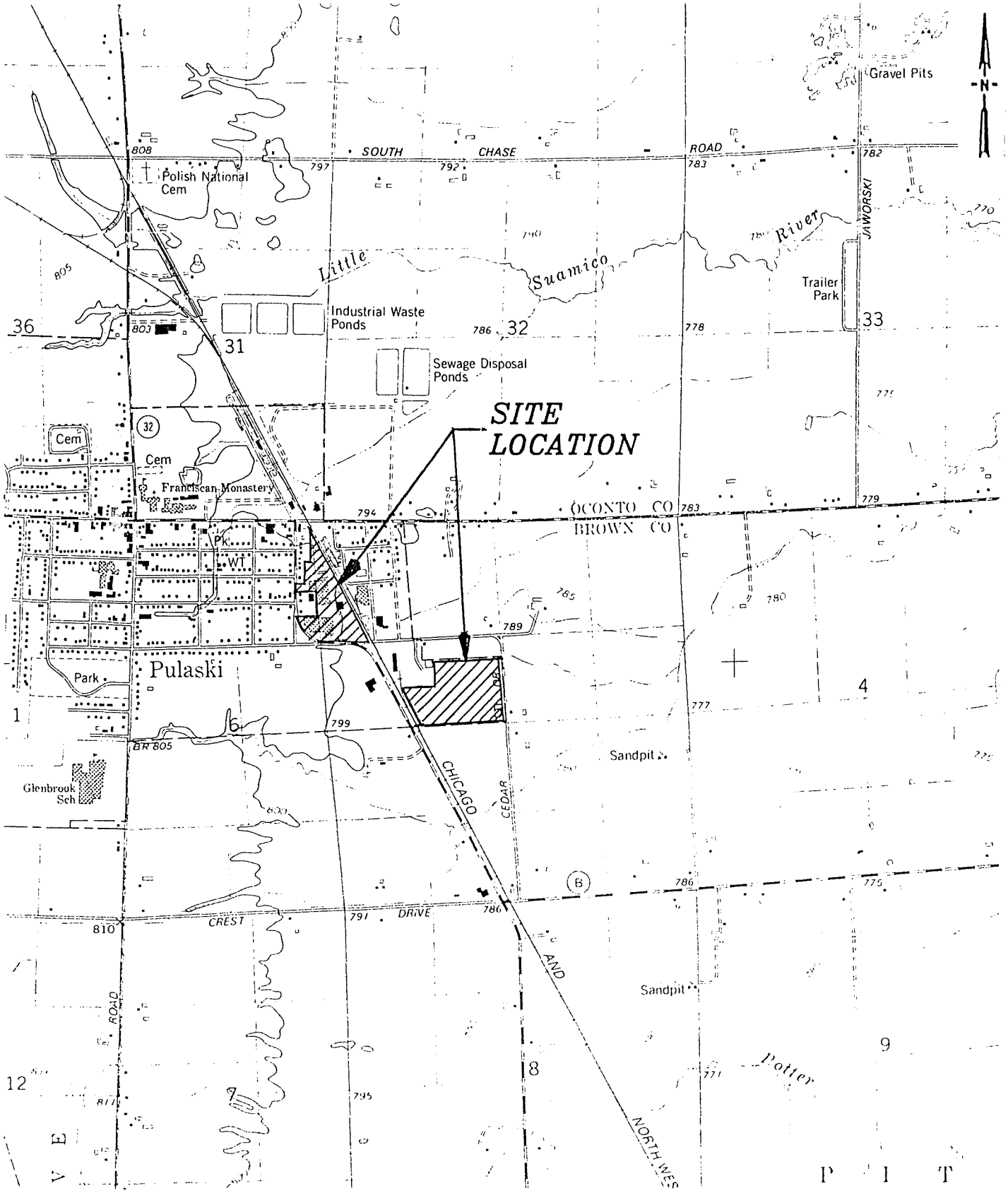
2.4 Report

The report will be prepared in accordance with Chapter NR 716.15 and will include the field and analytical data and our interpretations of the data.

3.0 SCHEDULE

The following is our anticipated schedule for the project:

- Complete the drilling program by March 20, 1998.
- Receive analytical results by April 10, 1998.
- Submit report to the WDNR by April 30, 1998.



MAP SOURCE: MODIFIED FROM PULASKI, WIS. U.S.G.S. QUADRANGLE DATED 1974.

STS Consultants Ltd.
Consulting Engineers

SITE LOCATION DIAGRAM
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY	[illegible]	2-24-98
CADFILE G479F001	SCALE 1"=2000'	
STS PROJECT NO. 23379XF	FIGURE NO. 1	

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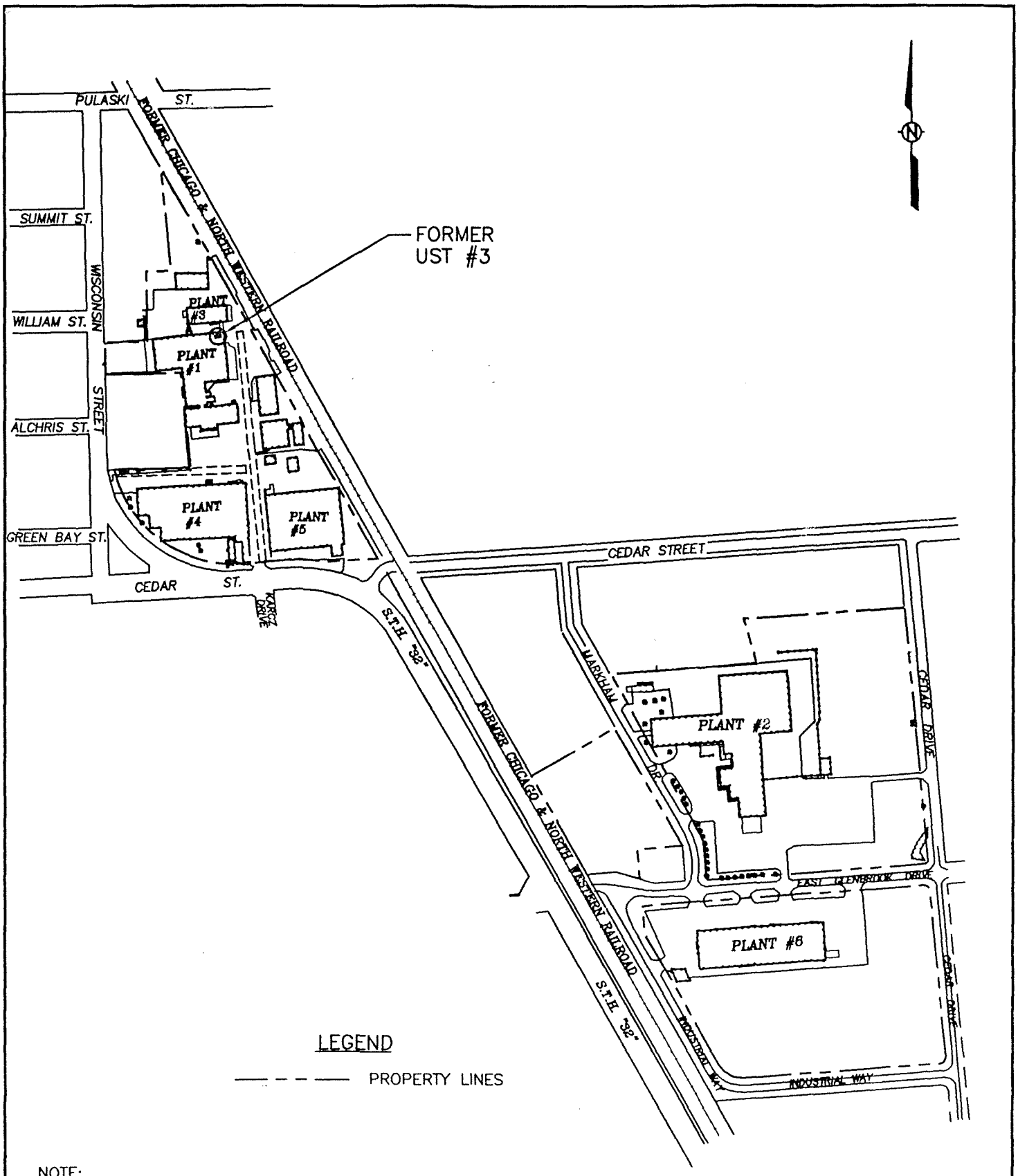

NOTE:
MAP MODIFIED FROM DRAWINGS FROM ROBERT E. LEE AND ASSOC.

STS Consultants Ltd.
Consulting Engineers

FACILITY LOCATIONS
CARVER BOAT CORPORATION
PULASKI, WISCONSIN

DRAWN BY	P.D.P.	2-23-98
CHECKED BY	W.F.N.	2-23-98
APPROVED BY	PRB	2-24-98
CADFILE G479F01	SCALE 1"=500'	
STS PROJECT NO. 23379XF	FIGURE NO. 2	

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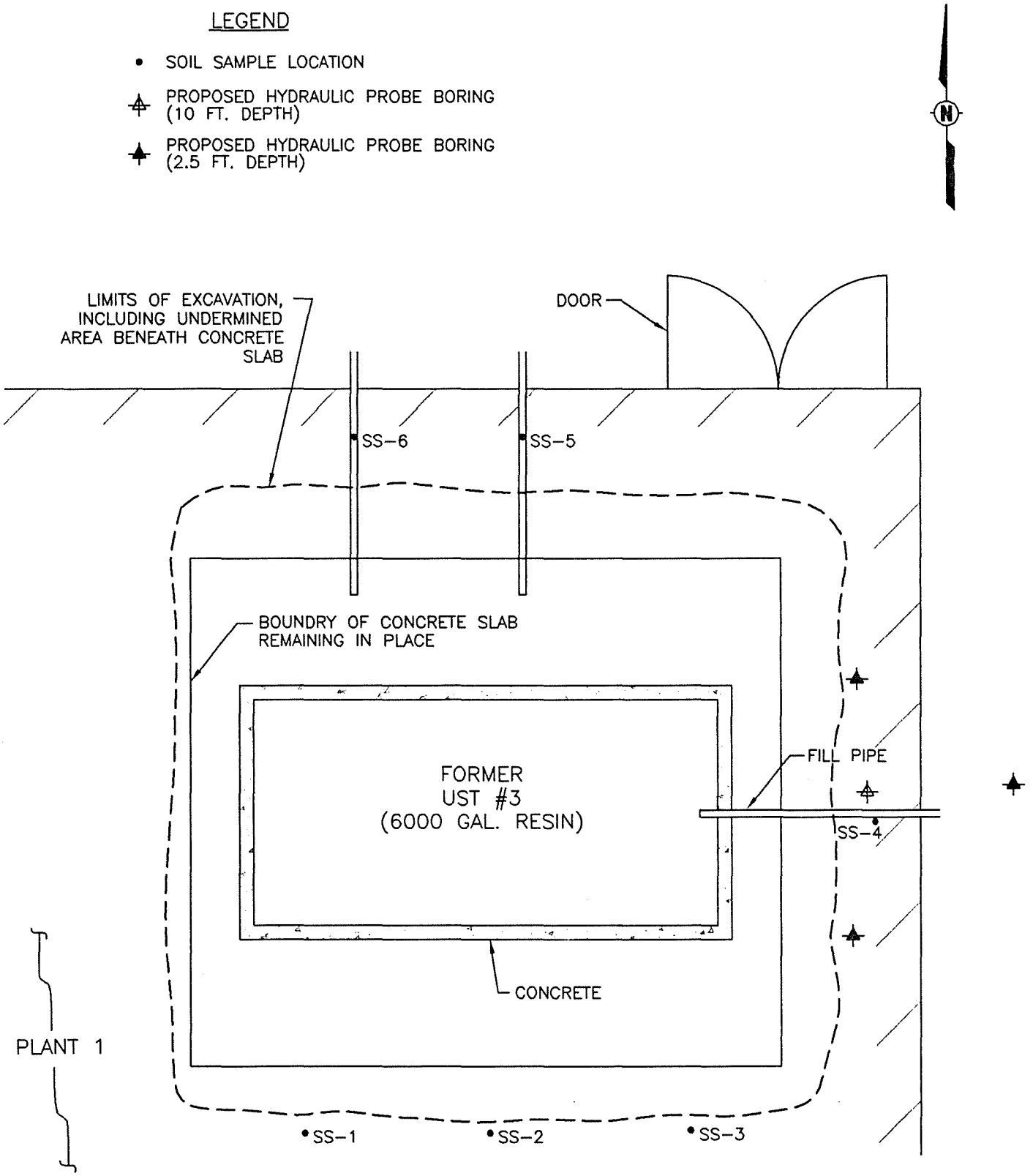
LEGEND

- SOIL SAMPLE LOCATION
- PROPOSED HYDRAULIC PROBE BORING (10 FT. DEPTH)
- PROPOSED HYDRAULIC PROBE BORING (2.5 FT. DEPTH)



STS Consultants Ltd.
Consulting Engineers

UST #3 PROPOSED HYDRAULIC PROBE LOCATION DIAGRAM CARVER BOAT CORPORATION PULASKI, WISCONSIN

DRAWN BY	R.A.B.	12-23-97
CHECKED BY	W.F.N.	2-23-98
APPROVED BY		
CADFILE	SCALE 1"=5'	
STS PROJECT NO. 23379XA	FIGURE NO. 3	

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02/26/1998 14:09

TABLE 1
SOIL FIELD OBSERVATIONS AND LABORATORY RESULTS
CARVER BOAT CORPORATION UST #3
PULASKI, WISCONSIN

Sample Location	Depth (feet)	FID (units)	Soil Description	Odor	Styrene (µg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Xylenes (µg/kg)	MTBE (µg/kg)
SS-1	3	<1	Brown Fine to Medium Silty Sand	No	<25	<25	<25	<25	<75	<25
SS-2	3	<1	Brown Fine to Medium Silty Sand	No	-	-	-	-	-	-
SS-3	3	<1	Brown Fine to Medium Silty Sand	No	<25	<25	<25	<25	<75	<25
SS-4	2.5	<1	Brown Fine to Medium Silty Sand	No	830	<25	<25	<25	53	<25
SS-5	2.5	<1	Brown Fine to Medium Silty Sand	No	-	-	-	-	-	-
SS-6	2.5	<1	Brown Fine to Medium Silty Sand	No	<25	<25	<25	<25	<75	<25

Notes:

FID = Flame Ionization Detector
- = Not Analyzed
VOCs not listed were not detected in any sample

RECEIVED
JAN 26 1998
MD SOLID WASTE

January 23, 1998

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

Re: Site Investigation/Remediation at Carver Boat Corporation, 790 Markham Drive, Pulaski, Wisconsin – **BRRTS Case Nos. 02-05-178563 and 02-05-178568** – STS Project No. 23379XA

Dear Ms. Nelezen-Chronert:

Carver Boat Corporation (Carver) of Pulaski, Wisconsin, has retained STS Consultants, Ltd., (STS) to prepare work plans for investigating impacts at two locations at this site. This letter is in response to your letters dated December 23, 1997, in which you requested that Carver provide written verification that an environmental consultant had been hired for this work.

Two work plans will be submitted. One work plan will address impacts identified on September 26, 1997, during removal of a resin underground storage tank (UST) known as Carver UST No. 3. The Wisconsin Department of Natural Resources (WDNR) assigned the number 02-05-178563 to this release. The second work plan will address impacts identified on October 3, 1997, during removal of two adjacent USTs (a resin UST known as Carver UST No. 6 and an acetone UST known as Carver UST No. 7). The WDNR assigned the number 02-05-178568 to this release.

Please contact us at 920-468-1978 if you have any questions regarding these projects.

Sincerely,

STS CONSULTANTS, LTD.

William F. Noel

William F. Noel, P.E.
Senior Project Engineer

Paula Leier-Engelhardt

Paula Leier-Engelhardt, P.G.
Senior Environmental Geologist

WFN/kjw.wd

STS Consultants Ltd.
Consulting Engineers

1035 Kepler Drive
Green Bay, Wisconsin 54311-8320
920.468.1978/Fax 920.468.3312

Copy to: Mr. Ted Maloney
Carver Boat Corporation
790 Markham Drive
P.O. Box 1010
Pulaski, Wisconsin 54162

(C479A001)

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

Northeast Regional Headquarters
Solid Waste Office
PO Box 10448, 1125 N. Military Ave.
Green Bay, Wisconsin 54307-0448
TELEPHONE 414-492-5916
FAX 414-492-5859
TDD 414-492-5812

December 23, 1997

Carver Boat Corporation
Ted Maloney
PO Box 1010
Pulaski WI 54162

SUBJECT: Reported Contamination at Carver Boat Corporation-Polyester/Styrene; 790 Markham Drive; Pulaski, Wisconsin
BRRTS CASE #02-05-178563

Dear Mr. Maloney:

The Wisconsin Department of Natural Resources has been notified of polyester/styrene contamination at the above referenced location.

Based on the information received by the Department of Natural Resources, we believe you are responsible for restoring the environment at this site under Section 292.11, Wisconsin Stats., known as the hazardous substances spills law. Your responsibilities include investigating the extent of the contamination and then selecting and implementing the most appropriate remedial action. Enclosed is information to help you understand what you need to do to ensure your compliance with the spills law.

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

Legal Responsibilities:
Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substances spill law, Section 292.11 (3) Wisconsin Statutes, states:

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

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

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

1. By January 26, 1998, please submit written verification (such as a letter from your consultant) that you have hired an environmental consultant. You will need to work quickly to meet this timeline.

2. By February 26, 1998, your consultant must submit a workplan and a schedule for conducting the investigation. The consultant must follow the Department's administrative codes and our technical guidance documents. Please include with your workplan a copy of any previous information that has been completed (such as an underground tank removal report or a preliminary soil excavation report).

3. Please keep us informed of what is being done at your site. You or your consultant must provide us with a brief report at least every 90 days, starting after your workplan is submitted. These quarterly reports should summarize the work completed since the last report. Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. However, please note that should conditions at your site warrant, you may receive a letter requiring more or less frequent contacts with the Department.

4. When the site investigation is complete, your consultant must submit a full report on the extent and degree of soil and groundwater contamination and a proposal for cleaning up the contamination.

Due to the number of contaminated sites and our staffing levels, we will be unable to respond to each report. To maintain your compliance with the spills law and chs. NR 700 through NR 728, do not delay the investigation and cleanup of your site by waiting for DNR responses. We have provided detailed technical guidance to environmental consultants. Your consultant is expected to be familiar with our technical procedures and administrative codes and should be able to answer your questions on meeting Wisconsin's cleanup requirements.

Your correspondence and reports regarding this site should be sent to the Department at the following address:

Wisconsin Department of Natural Resources
Roxanne Nelezen Chronert
PO Box 10448
Green Bay WI 54307-0448

If the contamination does not include groundwater contamination, the responsibility for governmental oversight of this site will be transferred to the Department of Commerce in accordance with Wisconsin Act 27.

Unless otherwise requested, please send only **one duplexed copy** of all plans and reports. Correspondence should be identified with the assigned **DNR identification number BRRTS CASE #02-05-178563.**

Information for Site Owners:
Enclosed is a list of environmental consultants and some important tips on selecting a consultant. Also enclosed are materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method. This information has been prepared to help you understand your responsibilities and what your environmental consultant needs to do. Please read this information carefully.

If you have any questions about this letter or your responsibilities, please call Roxanne Nelezen Chronert at (920)492-5592.

Thank you for your cooperation.

Sincerely,

Roxanne Nelezen Chronert
Spills Coordinator - Hydrogeologist

Enclosure

cc: File

Tank 3

Wisconsin Department of Natural Resources

Notification of Petroleum Contamination from Underground / Aboveground Storage Tank Systems

Please complete this form and FAX it to the appropriate WDNR contact person (see list on back page) immediately upon discovery of a release from (CIRCLE ONE) UST / AST system.

TO: WDNR, Attn: Roxanne Chronert

FAX #: 920-492-5859

PLEASE TYPE or PRINT LEGIBLY:

1. **Name, company, mailing address and phone number of person reporting the discharge:**

Ted Maloney
Carver Boat Corp
P.O. Box 1010, Pulaski, WI, 54162.
920-822-9000 x266

2. **Site Information**

Name of site at which discharge occurred (local name of site/business -- not responsible party name, unless a residence): Carver Boat Corp

Location (actual street address, not PO box; if no street address, describe as precisely as possible, i.e., 1/4 mile NW of CTHs 60 & 123 on E side of CTH 60):

790 Markham Dr.

Municipality (city, village, township in which the site is located -- not mailing address):

Pulaski

County:

Brown

Legal Description: _____ 1/4, _____ 1/4, Section _____, Tn _____, Range _____ E / W

3. **Responsible Party (RP) and/or RP Representative Information**

RP / Business Name: Carver Boat Corp

Contact Person (if different):

Mailing Address (with zip code): Same as Above

Telephone Number:

4. **Identity, physical state and quantity of the hazardous substance discharged (check all that apply):**

_____ Unleaded gasoline
_____ Leaded gasoline
_____ Diesel
_____ Fuel oil
_____ Waste oil
X Other Polyester/Styrene Mixture

Tank 3

5. **Impacts to the environment (enter "K" for known/confirmed or "P" for potential for all that apply):**

____ Fire/explosion threat	K Soil contamination
____ Contaminated private wells (# of wells)____	____ Surface water impacts
____ Contaminated public wells	____ Floating product
____ Groundwater contamination	____ Other____

6. **Contamination was discovered as a result of:**

X Tank closure assessment ____ Site assessment ____ (other)____

On what date:____

Additional Comments:

Carver Tank #	WI DNR Tank #	Contents
Tank 3 (6000 gal)	05110059 1	Polyester Resin / Styrene

Four samples were taken around the perimeter of the tank. Only one of the samples showed any traces of chemicals. The sample was located near the fill line & found styrene at 830 ppb and M+P xylene at 53 ppb. The soil was sampled at 3 feet and groundwater was encountered.

FAX numbers to report leaking tank sites in DNR's five regions are as follows:

Northeast Region (920-492-5859)
Underground Tanks: Attention - Janis DeBrock
Aboveground Tanks: Attention - Roxanne Chronert
Brown, Calumet, Door, Fond du Lac *(except City of Waupun - see South Central Region)*, Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, Waupaca, Waushara, Winnebago Counties

Northern Region (715-365-8932); Attention - Janet Kazda:
Ashland, Barron, Bayfield, Burnett, Douglas, Forest, Florence, Iron, Langlade, Lincoln, Oneida, Polk, Price, Rusk, Sawyer, Taylor, Vilas, Washburn Counties

South Central Region (608-275-3338); Attention - Marilyn Jahnke:
Columbia, Crawford, Dane, Dodge, Fond du Lac *(City of Waupun only)*, Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, Sauk Counties

Southeast Region (414-229-0810); Attention - Mike Furley:
Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington, Waukesha Counties

West Central Region (715-839-6076); Attention - John Grump:
Adams, Buffalo, Chippewa, Clark, Dunn, Eau Claire, Jackson, Juneau, LaCrosse, Marathon, Monroe, Pepin, Pierce, Portage, St. Croix, Trempealeau, Vernon, Wood Counties

Department of Natural Resources

ENVIRONMENTAL REPAIR PROGRAM
CASE TRACKING FORM FOR VER. ~~2~~ 2.1
Form 4400-150

I.D. # 02-05-178563

District: NER County: BROWN
Site Name: Carver Boat Corp
Polyester / styrene
Address: 790 Markham
Legal Municipality: Pulaski
T V C

Case No.: PMN:
FID:
Proj. Mgr:
Support Person:
Legal Desc: __1/4 __ 1/4 Sec ___, T ___, R ___ E/W
Lat: N ___ ° ___ . ___ ' Long: W ___ ° ___ . ___ '

Date of Discovery: 12 / 22 / 97
Date of RP Contact: ___ / ___ / ___

PRIORITY SCREENING:
___ 1 = High
___ 3 = Low
X 4 = Unknown

PRE-SCORE
_____ . _____

FUNDING SOURCE:
X 1 = RP
___ 2 = LTF
___ 3 = EF
___ 4 = SF
___ 5 = None
___ 6 = Other (Describe In Comments)
___ 7 = EPA Emergency Resp.

ENFORCEMENT AUTHORITY:
X 1 = Spill Law s. 144.76, Wis. Stats.
___ 2 = Envir Repair Law s. 144.442, Wis. Stats.
___ 3 = Hazardous Waste Rules NR 600 Series
___ 4 = Solid Waste Rules NR 500 Series
___ 5 = CERCLA
___ 6 = Abandoned Container s. 144.77, Wis. Stat.
___ 7 = Other (Describe in Comments)

PROGRAMS INVOLVED: (L - LEAD S - SUPPORT)

___ Aban Containers	___ NR 500 Solid Waste	___ Water Supply
___ Lust	___ Spills	___ Water Resources Mgt
___ NR 600 Hazardous Waste	___ Superfund	___ Env. Repair

RESPONSIBLE PARTY:
Business Name: Carver Boats
Owner/Mgr.: Ted Maloney
Address: PO Box 10110
Pulaski 54162
Phone: 920 / 822-9000 266
Contact Person:

Business Name:
Owner/Mgr.:
Address:
Phone: ___ / _____
Contact Person:

		KNOWN IMPACTS (X)	POTENTIAL IMPACTS (X)
No Threat		___	
Fire/Explosion threat	(1)	___	___
Contaminated Private Well	(2)	___	___
Contaminated Public Well	(3)	___	___
Groundwater Contamination	(4)	___	___
Soil Contamination	(5)	___	___
Direct Contact	(10)	___	___
Contaminated Surface Water	(7)	___	___
Contaminated Air	(8)	___	___
Other _____	(6)	___	___

CONSULTANT INFORMATION:
Company: STS
Contact Person:
Address: 1035 Kepler Dr
G.B WI 54307-
Phone: 920 / 468-1978
(List additional on separate sheet & attach.)

Company:
Contact Person:
Address:
Phone: ___ / _____

NER ERP Tracking Updates Your Name_____ Date_____

1 of 1

ACTION CODES

01 = Notification	50 = Site Closed w/GW Use Restriction	58 = Enforcement Start	74 = Long Term Monitoring Start	85 = NR720.19 Performance Based Closure
02 = RP Letter Sent	51 = Deed Affidavit at Closeout	59 = Enforcement End	75 = Long Term Monitoring End	87 = Closeout under NR726.07
11 = Activity Closed	52 = Deed Restriction at Closeout	61 = NR718 Landspreading Request	76 = Activity Transferred to DCOM	89 = DCOM transferred activity back to DNR
37 = SI Report Rec'd	53 = Deed Affidavit for Enforcement	62 = NR718 Landspreading Approval	77 = Free Product Removal Start	
41 = RA Report Rec'd	54 = Activity transferred to DATCP	70 = Emergency Response Start	78 = Free Product Removal End	
48 = NR140 Exemp Closure	55 = Closed w/NR720.19 soil standards	71 = Emergency Response End	79 = Closure Review Requested	

Unique ID #	Code	Action Date	Comment
	01	12/22/97	
	02	12/23/97	
	35	2/27/98	SI WP
	33	3/2/98	Tank Removal
	11	4/26/99	No Restrictions
		/ /	
		/ /	
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Phenco, inc.

Carver USTs #3 and 4

ENVIRONMENTAL CONSTRUCTION

TANK DISPOSAL FORM

Phenco Inc

1907 American Dr.

Neenah Wi. 54956

Received from **Phenco, Inc.** *agent for project No./name* # 7029 Carver Boats

790 Wakefield Dr - P.O Box 1010

Location Pulaski Wi. 54126

2 *Tank(s) for recycle or disposal. Tanks have been properly cleaned and rendered non-reusable.*

Received By: Kay Rogers (SADOFF Iron + metal)

Date: 10-1-97

1907 American Drive, P.O. Box 280 * Neenah, Wisconsin 54957-0280
Phone 414/729-4305 * Fax 414/729-4306
"An Equal Opportunity Employer"

APPENDIX B

Underground Petroleum Product Tank Inventory Form (ERS-7437)

Checklist for Underground Tank Closure (ERS-8951)

UST #3

State of Wisconsin

WI Tank ID#: 05110059L

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Information Required By Section 101.142, Wis. Stats.

Send Completed Form To:
Department of Commerce
ERS Division
Bureau of Storage Tank Regulation
P.O. Box 7969, Madison, WI 53707

Underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances must be registered. Please see the reverse side for additional information on this program. An underground storage tank is defined as any tank with at least 10 percent of its total volume (including piping) located below ground level. A separate form is needed for each tank. Send each completed form to the agency designated in the top right corner. Have you previously registered this tank by submitting a form? ☒ Yes ☐ No If yes, are you correcting/updating information only? ☒ Yes ☐ No

Personal information you provide may be used for secondary purposes. [Privacy Law, s. 15.04 (1)(m)]

This registration applies to a tank that is (check one):

1A. ☐ In Use or
1B. ☐ Newly Installed
2. ☐ Abandoned with Product
3. ☐ Abandoned No Product (empty) or with Water
4. ☒ Closed - Tank Removed
6. ☐ Closed - Filled with Inert Materials
7. ☐ Out of Service - Provide Date: _____
8. ☐ Ownership Change (Indicate new owner name in block 2)

Fire Department providing fire coverage where tank is located:
☐ City ☒ Village 05110
☐ Town of PULASKI

A. IDENTIFICATION (Please Print)

1. Tank Site Name	Site Address		Site Telephone Number
CARVER BOAT CORP	790 MARKHAM DR		(920) 822-9000
☐ City ☒ Village ☐ Town of:	State	Zip Code	County
PULASKI	WI	54162	BROWN
2. Tank Owner Name	Mailing Address		Telephone Number
CARVER BOAT CORP	P.O. BOX 1010		(920) 822-9000
☐ City ☒ Village ☐ Town of:	State	Zip Code	County
PULASKI	WI.	54162	BROWN
3. Previous Name	Previous site address if different than #1		
	PLANT 2 BUILDING 14		
4. Tank Age (date installed, if known or years old)	5. Tank Capacity (gallons)	6. If more than one tank is located at facility, please provide tank #	
1-1-63	6000	05110059L	

B. TYPE OF USER (check one)

1. ☐ Gas/Retail Sales
2. ☐ Bulk Storage
3. ☐ Utility
4. ☐ Mercantile/Commercial
5. ☒ Industrial
6. ☐ Government
7. ☐ School
8. ☐ Residential
9. ☐ Agricultural
10. ☐ Other (specify):
11. ☐ Tribal Nation
12. ☐ Federal Property
13. ☐ Backup Generator

C. TANK CONSTRUCTION (check one)

1. ☐ Bare Steel
2. ☐ Cathodically Protected & Coated Steel (Check one: A. ☐ Sacrificial Anodes or B. ☐ Impressed Current)
3. ☒ Coated Steel
4. ☐ Fiberglass
5. ☐ Other (specify): _____
6. ☐ Lined - Date: _____
7. ☐ Steel - Fiberglass Reinforced Plastic Composite
9. ☐ Unknown

Approval: 1. ☐ Nat'l Std. 2. ☐ UL 3. ☐ Other:
Is tank double walled? ☐ Yes ☒ No

Overfill Protection Provided? ☐ Yes ☒ No If yes, identify type:
Spill Containment? ☐ Yes ☒ No

Tank leak detection method:
1. ☐ Automatic tank gauging
2. ☐ Vapor monitoring
3. ☐ Groundwater monitoring
4. ☒ Inventory control and tightness testing
5. ☐ Interstitial monitoring
7. ☐ Manual tank gauging (only for tanks of 1,000 gallons or less)
8. ☐ Statistical Inventory Reconciliation (SIR)

D. PIPING CONSTRUCTION

1. ☒ Bare Steel
2. ☐ Cathodically Protected & Coated Steel (Check one: A. ☐ Sacrificial Anodes or B. ☐ Impressed Current)
3. ☐ Coated Steel
4. ☐ Fiberglass
5. ☐ Other (Specify):
9. ☐ Unknown

Vapor Recovery/Stage II NA
4. ☐ Fiberglass
6. ☐ Flexible
5. ☐ Other (specify):
☐ CARB #: _____
☐ Operational - Provide Date (mo/day/yr):

Piping System Type:
1. ☐ Pressurized piping with A. ☐ auto shutoff; B. ☐ alarm or C. ☐ flow restrictor
2. ☐ Suction piping with check valve at tank
3. ☐ Suction piping with check valve at pump and inspectable
4. ☐ Not needed if waste oil

Piping leak detection method: used if pressurized or check valve at tank:
1. ☐ Vapor monitoring
2. ☐ Interstitial monitoring
3. ☐ Groundwater monitoring
4. ☐ Tightness testing
5. ☐ Line leak detector
6. ☒ Not required
8. ☐ SIR

Approval: 1. ☐ Nat'l Std. 2. ☐ UL 3. ☐ Other:
Is pipe double walled? ☐ Yes ☒ No

E. TANK CONTENTS

1. ☐ Diesel
2. ☐ Leaded
3. ☐ Unleaded
4. ☐ Fuel Oil
5. ☐ Gasohol
6. ☐ Other (Specify): _____
7. ☐ Empty*
8. ☐ Sand/Gravel/Slurry*
9. ☐ Unknown*
10. ☐ Premix
11. ☐ Waste/Used Motor Oil
13. ☒ Chemical RESIN
14. ☐ Kerosene
15. ☐ Aviation

(Indicate chemical name and number)

* If 7, 8, 9, or 13 is chosen, this tank is NOT PECFA eligible. 99999999

If Tank Closed, Abandoned or Out of Service, give date (mo/day/yr): 10-3-97

Has a site assessment been completed (see reverse side for details)
☒ Yes ☐ No

Owner or Operator Name (please print): Ted Maloney

Indicate whether:
☐ Owner or ☒ Operator

Owner or Operator Signature: Ted Maloney

Date Signed 10-3-97

IMPORTANT: Failure to provide sufficient information may cause you to fall under additional regulations, and may delay PECFA eligibility determination. It is necessary to complete ALL shaded areas and as many other items as possible.

ERS-7437 (R. 01/97)

UST#3

Wisconsin Department of Industry, Labor and Human Relations

Complete one form for each site closure.

CHECKLIST FOR UNDERGROUND TANK CLOSURE

RETURN COMPLETED CHECKLIST TO:
Safety & Buildings Division
Fire Prevention & Underground Storage Tank Section
P. O. Box 7969, Madison, WI 53707

A. IDENTIFICATION: (Please Print) Indicate whether closure is for: ☒ Tank System ☐ Tank Only ☐ Piping Only

1. Site Name	2. Owner Name
Carver Boat Corp	CARVER BOAT CORP
Site Street Address (not P.O. Box)	Owner Street Address
790 Markham Dr	P.O. Box 1010
☐ City ☒ Village ☐ Town of:	☐ City ☒ Village ☐ Town of:
Pulaski	Pulaski
State: WI	State: WI
Zip Code: 54162 ~~54126~~	Zip Code: 54162 ~~54126~~
County: Brown	County: Brown
	Telephone No. (include area code): (920) 822-9000

3. Closure Company Name (Print)	Closure Company Street Address,
Phenco INC	1977 American Dr.
Closure Company Telephone No. (include area code)	Closure Company City, State, Zip Code
(920) 729-4305	NEENAH WI 54957
4. Name of Company Performing Closure Assessment	Assessment Company Street Address, City, State, Zip Code
STS Consultants LTD	1035 Kepler Dr Green Bay WI 54311
Telephone # (include area code)	Certified Assessor Name (Print) / Assessor Signature / Assessor Certification No.
(920) 468-1978	Jim Calaway / Jim Calaway / 24826

Tank ID #	Closure	Temp. Closure	Closure In Place	Tank Capacity	Contents *	Closure Assessment
1. 05/100591	☒	☐	☐	6000	13 ~~26~~	☒ Y ☐ N
2.	☐	☐	☐			☐ Y ☐ N
3.	☐	☐	☐			☐ Y ☐ N
4.	☐	☐	☐			☐ Y ☐ N
5.	☐	☐	☐			☐ Y ☐ N
6.	☐	☐	☐			☐ Y ☐ N

* Indicate which product by numeric code: 01-Diesel; 02-Leaded; 03-Unleaded; 04-Fuel Oil; 05-Gasohol; 06-Other; 09-Unknown; 10-Premix; 11-Waste oil; 13-Chemical (indicate the chemical name(s) or numbers(s) _____ _____ _____; 14-Kerosene; 15-Aviation.

Written notification was provided to the local agent 15 days in advance of closure date. ☒ Y ☐ N ☐ NA
All local permits were obtained before beginning closure. ☒ Y ☐ N ☐ NA

Check applicable box at right in response to all statements in Sections B - E.	Remover Verified	Inspector Verified	NA
B. TEMPORARILY OUT OF SERVICE			
Written inspector approval of temporary closure obtained, which is effective until (provide date) _____	☐ Y ☐ N	☐	☒
1. Product Removed			
a. Product lines drained into tank (or other container) and resulting liquid removed, AND	☐ Y ☐ N	☐	☒
b. All product removed to bottom of suction line, OR	☐ Y ☐ N	☐	☒
c. All product removed to within 1" of bottom.	☐ Y ☐ N	☐	☒
2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.	☐ Y ☐ N	☐	☒
3. All product lines at the islands or pumps located elsewhere are removed and capped, OR	☐ Y ☐ N	☐	☒
4. Dispensers/pumps left in place but locked and power disconnected.	☐ Y ☐ N	☐	☒
5. Vent lines left open.	☐ Y ☐ N	☐	☒
6. Inventory form filed indicating temporary closure.	☐ Y ☐ N	☐	☒
C. CLOSURE BY REMOVAL			
1. Product from piping drained into tank (or other container).	☒ Y ☐ N	☒	☐
2. Piping disconnected from tank and removed.	☒ Y ☐ N	☒	☐
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☒ Y ☐ N	☒	☐
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☐ Y ☐ N	☐	☒
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. **NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR.**	☐ Y ☐ N	☐	☒
6. Vent lines left connected until tanks purged.	☐ Y ☐ N	☐	☒
7. Tank openings temporarily plugged so vapors exit through vent.	☐ Y ☐ N	☐	☒
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	☒ Y ☐ N	☒	☐
9. Tank removed from excavation after **PURGING/INERTING**; placed on level ground and blocked to prevent movement.	☒ Y ☐ N	☒	☐
10. Tank cleaned before being removed being removed from site.	☒ Y ☐ N	☒	☐

- CONTINUE ON NEXT PAGE -

C. CLOSURE BY REMOVAL (continued)

	Remover Verified	Inspector Verified	NA
11. Tank labeled in 2" high letters after removal but before being moved from site.	☐ Y ☐ N	☒	☒
NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE; FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE.			
12. Tank vent hole (1/8 th " in uppermost part of tank) installed prior to moving the tank from site.	☐ Y ☐ N	☐	☒
13. Inventory form filed by owner with Safety and Buildings Division indicating closure by removal.	☒ Y ☐ N	☒	☐
14. Site security is provided while the excavation is open.	☒ Y ☐ N	☒	☐

D. CLOSURE IN PLACE

NOTE: CLOSURES IN PLACE ARE ONLY ALLOWED WITH THE PRIOR WRITTEN APPROVAL OF THE DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS OR LOCAL AGENT.

1. Product from piping drained into tank (or other container).			
2. Piping disconnected from tank and removed.	☐ Y ☐ N	☐	☒
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☐ Y ☐ N	☐	☒
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☐ Y ☐ N	☐	☒
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.	☐ Y ☐ N	☐	☒
NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR - EDUCTOR OUTPUT 12 FT ABOVE GRADE.			
6. Vent lines left connected until tanks purged.	☐ Y ☐ N	☐	☒
7. Tank openings temporarily plugged so vapors exit through vent.	☐ Y ☐ N	☐	☒
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	☐ Y ☐ N	☐	☒
9. Tank properly cleaned to remove all sludge and residue.	☐ Y ☐ N	☐	☒
10. Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled.	☐ Y ☐ N	☐	☒
11. Vent line disconnected or removed.	☐ Y ☐ N	☐	☒
12. Inventory form filed by owner with Safety and Buildings Division indicating closure in place.	☐ Y ☐ N	☐	☒

E. CLOSURE ASSESSMENTS

NOTE: DETERMINE IF A CLOSURE ASSESSMENT IS REQUIRED BY REFERRING TO ILHR 10.

1. Individual conducting the assessment has a closure assessment plan (written) which is used as the basis for their work on the site.	☒ Y ☐ N	☐	☐
2. Do points of obvious contamination exist?	☐ Y ☒ N	☐	☐
3. Are there strong odors in the soils?	☐ Y ☒ N	☐	☐
4. Was a field screening instrument used to pre-screen soil sample locations?	☒ Y ☐ N	☐	☐
5. Was a closure assessment omitted because of obvious contamination?	☐ Y ☒ N	☐	☐
6. Was the DNR notified of suspected or obvious contamination?	☐ Y ☒ N	☐	☐

Agency, office and person contacted: _____

7. Contamination suspected because of: ☐ Odor ☐ Soil Staining ☐ Free Product ☐ Sheen On Groundwater ☐ Field Instrument Test

F. METHOD OF ACHIEVING 10% LEVEL DESCRIPTION

☒ Educator Or Diffused Air Blower

Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum of 12 feet above ground. Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.

☐ Dry Ice

Dry ice introduced at 1.5 pounds per 100 gallons of tank capacity. Dry ice crushed and distributed over the greatest possible tank area. Dry ice evaporated before proceeding.

☐ Inert Gas (CO/2 or N/2) **NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHERE. THE TANK MAY NOT BE ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT**

Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank opposite the vent. Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing device grounded.

☒ Tank atmosphere monitored for flammable or combustible vapor levels.

Calibrate combustible gas indicator. Drop tube removed prior to checking atmosphere. Tank space monitored at bottom, middle and upper portion of tank. Readings of 10% or less of the lower flammable range (LEL) obtained before removing tank from ground.

G. NOTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW

TANK Contents Polyester Resin. CUT-UP ON SITE.

H. REMOVER/CLEANER INFORMATION

John Wolters	John Wolters	01019	10-2-97
Remover Name (print)	Remover Signature	Remover Certification No.	Date Signed

I. INSPECTOR INFORMATION

ROBERT E. DUNKS	Robert E. Dunks	35003
Inspector Name (print)	Inspector Signature	Inspector Certification No.
05110	(920) 748-2806	10-3-97
FDID # For Location Where Inspection Performed	Inspector Telephone Number	Date Signed

APPENDIX C

Analytical Laboratory Reports (Soil Testing)

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-1
Lab Code: 5018852A
Sample Type: Soil
Sample Date: 26-Sep-97

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	84.9			%		30-Sep-97	BNR	1
VOC								
Mod SW846 8021 (Meth Pres.)						04-Oct-97	CJR	
Styrene	< 25	10	33	UG/KG	1			1
Fluorobenzene Surrogate	84.9			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97
Analyzed By: CJR

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-1
Lab Code: 5018852A
Sample Type: Soil
Sample Date: 26-Sep-97
Date Analyzed: 03-Oct-97

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
Benzene	< 25	10	33	1
Bromobenzene	< 25	5.8	19	1
Bromodichloromethane	< 25	6.1	19	1
n-Butylbenzene	< 25	14	46	1
sec-Butylbenzene	< 25	18	58	1
tert-Butylbenzene	< 25	10	33	1
Carbon Tetrachloride	< 25	16	51	1
Chlorobenzene	< 25	5.8	19	1
Chloroethane	< 25	20	64	1
Chloroform	< 25	8.8	28	1
Chloromethane	< 25	15	47	1
2-Chlorotoluene	< 25	6.1	19	1
4-Chlorotoluene	< 25	7	22	1
1,2-Dibromo-3-Chloropropane	< 25	8.5	27	1
Dibromochloromethane	< 25	1.8	5.7	1
1,2-Dichlorobenzene	< 25	5	16	1
1,3-Dichlorobenzene	< 25	5.5	18	1
1,4-Dichlorobenzene	< 25	5.5	18	1
Dichlorodifluoromethane	< 25	21	68	1
1,1-Dichloroethane	< 25	9.4	30	1
1,2-Dichloroethane	< 25	5.4	17	1
1,1-Dichloroethene	< 25	16	50	1
cis-1,2-Dichloroethene	< 25	8.8	28	1
trans-1,2-Dichloroethene	< 25	12	37	1
1,2-Dichloropropane	< 25	5.9	19	1
1,3-Dichloropropane	< 25	6.6	21	1

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	23	73	1
Di-isopropyl Ether	< 25	8.1	26	1
Ethylbenzene	< 25	10	30	1
EDB (1,2-Dibromoethane)	< 25	1.3	4.2	1
Hexachlorobutadiene	< 25	13	43	1
Isopropylbenzene	< 25	11	34	1
p-Isopropyltoluene	< 25	11	34	1
Methylene Chloride	< 25	8	25	1
MTBE	< 25	6.1	19	1
Naphthalene	< 25	20	65	1
n-Propylbenzene	< 25	11	36	1
1,1,2,2-Tetrachloroethane	< 25	7.2	23	1
Tetrachloroethene	< 25	14	43	1
Toluene	< 25	11	36	1
1,2,3-Trichlorobenzene	< 25	19	60	1
1,2,4-Trichlorobenzene	< 25	16	51	1
1,1,1-Trichloroethane	< 25	12	40	1
1,1,2-Trichloroethane	< 25	2.2	7	1
Trichloroethene	< 25	10	31	1
Trichlorofluoromethane	< 25	25	83	1
124-Trimethylbenzene	< 25	7.7	25	1
1,3,5-Trimethylbenzene	< 25	15	47	1
Vinyl Chloride	< 25	18	57	1
m&p-Xylene	< 50	18	59	1
o-Xylene	< 25	6.6	21	1

Fluorobenzene Surrogate 93 % Rec.
1,4-Dichlorobutane Surrogate 101 % Rec.
Total % Solids 84.9

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060311

GC #6

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: 23379XF Report Date: 10-Oct-97
Sample ID: SS-1 Lab Code: 5018852A

ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	F	P	F	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	F	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	F	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-DCP,cis-1,2-DCE	P	P	P	P	P	P	P
Di-isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	P	P	P	P
124-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	F	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 060311

VOC analysis detected unidentified peaks.

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-3
Lab Code: 5018852B
Sample Type: Soil
Sample Date: 26-Sep-97

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	94.8			%		30-Sep-97	BNR	1
VOC								
Mod SW846 8021 (Meth Pres.)						04-Oct-97	CJR	
Styrene	< 25	10	33	UG/KG	1			1
Fluorobenzene Surrogate	94.8			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97
Analyzed By: CJR

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-3
Lab Code: 5018852B
Sample Type: Soil
Sample Date: 26-Sep-97
Date Analyzed: 03-Oct-97

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
Benzene	< 25	10	33	1
Bromobenzene	< 25	5.8	19	1
Bromodichloromethane	< 25	6.1	19	1
n-Butylbenzene	< 25	14	46	1
sec-Butylbenzene	< 25	18	58	1
tert-Butylbenzene	< 25	10	33	1
Carbon Tetrachloride	< 25	16	51	1
Chlorobenzene	< 25	5.8	19	1
Chloroethane	< 25	20	64	1
Chloroform	< 25	8.8	28	1
Chloromethane	< 25	15	47	1
2-Chlorotoluene	< 25	6.1	19	1
4-Chlorotoluene	< 25	7	22	1
1,2-Dibromo-3-Chloropropane	< 25	8.5	27	1
Dibromochloromethane	< 25	1.8	5.7	1
1,2-Dichlorobenzene	< 25	5	16	1
1,3-Dichlorobenzene	< 25	5.5	18	1
1,4-Dichlorobenzene	< 25	5.5	18	1
Dichlorodifluoromethane	< 25	21	68	1
1,1-Dichloroethane	< 25	9.4	30	1
1,2-Dichloroethane	< 25	5.4	17	1
1,1-Dichloroethene	< 25	16	50	1
cis-1,2-Dichloroethene	< 25	8.8	28	1
trans-1,2-Dichloroethene	< 25	12	37	1
1,2-Dichloropropane	< 25	5.9	19	1
1,3-Dichloropropane	< 25	6.6	21	1

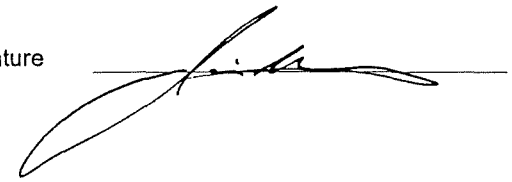
ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	23	73	1
Di-isopropyl Ether	< 25	8.1	26	1
Ethylbenzene	< 25	10	30	1
EDB (1,2-Dibromoethane)	< 25	1.3	4.2	1
Hexachlorobutadiene	< 25	13	43	1
Isopropylbenzene	< 25	11	34	1
p-Isopropyltoluene	< 25	11	34	1
Methylene Chloride	< 25	8	25	1
MTBE	< 25	6.1	19	1
Naphthalene	< 25	20	65	1
n-Propylbenzene	< 25	11	36	1
1,1,2,2-Tetrachloroethane	< 25	7.2	23	1
Tetrachloroethene	< 25	14	43	1
Toluene	< 25	11	36	1
1,2,3-Trichlorobenzene	< 25	19	60	1
1,2,4-Trichlorobenzene	< 25	16	51	1
1,1,1-Trichloroethane	< 25	12	40	1
1,1,2-Trichloroethane	< 25	2.2	7	1
Trichloroethene	< 25	10	31	1
Trichlorofluoromethane	< 25	25	83	1
124-Trimethylbenzene	< 25	7.7	25	1
1,3,5-Trimethylbenzene	< 25	15	47	1
Vinyl Chloride	< 25	18	57	1
m&p-Xylene	< 50	18	59	1
o-Xylene	< 25	6.6	21	1

Fluorobenzene Surrogate	104 % Rec.
1,4-Dichlorobutane Surrogate	101 % Rec.
Total % Solids	94.8

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060311

GC #6

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: 23379XF
Sample ID: SS-3
Report Date: 10-Oct-97
Lab Code: 5018852B

ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	F	P	F	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	F	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	F	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-DCP,cis-1,2-DCE	P	P	P	P	P	P	P
Di-isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	P	P	P	P
124-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	F	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 060311

VOC analysis detected unidentified peaks.

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-4
Lab Code: 5018852C
Sample Type: Soil
Sample Date: 26-Sep-97

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	91.0			%		30-Sep-97	BNR	1
VOC								
Mod SW846 8021 (Meth Pres.)						08-Oct-97	CJR	
Styrene	830	10	33	UG/KG	1			1
Fluorobenzene Surrogate	91			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97
Analyzed By: CJR

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-4
Lab Code: 5018852C
Sample Type: Soil
Sample Date: 26-Sep-97
Date Analyzed: 03-Oct-97

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
Benzene	< 25	10	33	1
Bromobenzene	< 25	5.8	19	1
Bromodichloromethane	< 25	6.1	19	1
n-Butylbenzene	< 25	14	46	1
sec-Butylbenzene	< 25	18	58	1
tert-Butylbenzene	< 25	10	33	1
Carbon Tetrachloride	< 25	16	51	1
Chlorobenzene	< 25	5.8	19	1
Chloroethane	< 25	20	64	1
Chloroform	< 25	8.8	28	1
Chloromethane	< 25	15	47	1
2-Chlorotoluene	< 25	6.1	19	1
4-Chlorotoluene	< 25	7	22	1
1,2-Dibromo-3-Chloropropane	< 25	8.5	27	1
Dibromochloromethane	< 25	1.8	5.7	1
1,2-Dichlorobenzene	< 25	5	16	1
1,3-Dichlorobenzene	< 25	5.5	18	1
1,4-Dichlorobenzene	< 25	5.5	18	1
Dichlorodifluoromethane	< 25	21	68	1
1,1-Dichloroethane	< 25	9.4	30	1
1,2-Dichloroethane	< 25	5.4	17	1
1,1-Dichloroethene	< 25	16	50	1
cis-1,2-Dichloroethene	< 25	8.8	28	1
trans-1,2-Dichloroethene	< 25	12	37	1
1,2-Dichloropropane	< 25	5.9	19	1
1,3-Dichloropropane	< 25	6.6	21	1

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	23	73	1
Di-isopropyl Ether	< 25	8.1	26	1
Ethylbenzene	< 25	10	30	1
EDB (1,2-Dibromoethane)	< 25	1.3	4.2	1
Hexachlorobutadiene	< 25	13	43	1
Isopropylbenzene	< 25	11	34	1
p-Isopropyltoluene	< 25	11	34	1
Methylene Chloride	< 25	8	25	1
MTBE	< 25	6.1	19	1
Naphthalene	< 25	20	65	1
n-Propylbenzene	< 25	11	36	1
1,1,2,2-Tetrachloroethane	< 25	7.2	23	1
Tetrachloroethene	< 25	14	43	1
Toluene	< 25	11	36	1
1,2,3-Trichlorobenzene	< 25	19	60	1
1,2,4-Trichlorobenzene	< 25	16	51	1
1,1,1-Trichloroethane	< 25	12	40	1
1,1,2-Trichloroethane	< 25	2.2	7	1
Trichloroethene	< 25	10	31	1
Trichlorofluoromethane	< 25	25	83	1
124-Trimethylbenzene	< 25	7.7	25	1
1,3,5-Trimethylbenzene	< 25	15	47	1
Vinyl Chloride	< 25	18	57	1
m&p-Xylene	53	18	59	1
o-Xylene	< 25	6.6	21	1

Fluorobenzene Surrogate	105 % Rec.
1,4-Dichlorobutane Surrogate	100 % Rec.
Total % Solids	91

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060311

GC #6

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: 23379XF
Sample ID: SS-4
Report Date: 10-Oct-97
Lab Code: 5018852C

ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	F	P	F	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	F	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	F	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-DCP,cis-1,2-DCE	P	P	P	P	P	P	P
Di-isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	P	P	P	P
124-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	F	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 060311

VOC analysis detected unidentified peaks.

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-6
Lab Code: 5018852D
Sample Type: Soil
Sample Date: 26-Sep-97

Test	Result	LOD	LOQ	Unit	Dilution Factor	Date Analyzed:	Analyzed By:	QC Code
TOTAL SOLIDS	86.1			%		30-Sep-97	BNR	1
VOC								
Mod SW846 8021 (Meth Pres.)						04-Oct-97	CJR	
Styrene	< 25	10	33	UG/KG	1			1
Fluorobenzene Surrogate	86.1			% Rec.				

LOD = Limit of Detection "J" Flag: Analyte detected between LOD and LOQ. LOQ = Limit of Quantitation

QC SUMMARY

CODE:

1 All laboratory QC requirements were met for this sample.

Authorized Signature

U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

VOC
Method 8021 Volatile Organic Compounds
(Methanol Preserved)

BILL NOEL
S T S CONSULTANTS LTD
1035 KEPLER DRIVE
GREEN BAY WI 54311

Report Date: 10-Oct-97
Analyzed By: CJR

Project #: 23379XF
Project : Carver Boat Tank #3
Sample ID: SS-6
Lab Code: 5018852D
Sample Type: Soil
Sample Date: 26-Sep-97
Date Analyzed: 03-Oct-97

ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
Benzene	< 25	10	33	1
Bromobenzene	< 25	5.8	19	1
Bromodichloromethane	< 25	6.1	19	1
n-Butylbenzene	< 25	14	46	1
sec-Butylbenzene	< 25	18	58	1
tert-Butylbenzene	< 25	10	33	1
Carbon Tetrachloride	< 25	16	51	1
Chlorobenzene	< 25	5.8	19	1
Chloroethane	< 25	20	64	1
Chloroform	< 25	8.8	28	1
Chloromethane	< 25	15	47	1
2-Chlorotoluene	< 25	6.1	19	1
4-Chlorotoluene	< 25	7	22	1
1,2-Dibromo-3-Chloropropane	< 25	8.5	27	1
Dibromochloromethane	< 25	1.8	5.7	1
1,2-Dichlorobenzene	< 25	5	16	1
1,3-Dichlorobenzene	< 25	5.5	18	1
1,4-Dichlorobenzene	< 25	5.5	18	1
Dichlorodifluoromethane	< 25	21	68	1
1,1-Dichloroethane	< 25	9.4	30	1
1,2-Dichloroethane	< 25	5.4	17	1
1,1-Dichloroethene	< 25	16	50	1
cis-1,2-Dichloroethene	< 25	8.8	28	1
trans-1,2-Dichloroethene	< 25	12	37	1
1,2-Dichloropropane	< 25	5.9	19	1
1,3-Dichloropropane	< 25	6.6	21	1

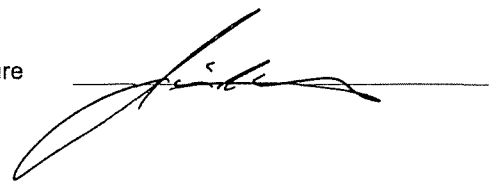
ANALYTE	RESULT	LOD UG/KG	LOQ UG/KG	Dilution Factor
2,2-DCP,cis-1,2-DCE	< 25	23	73	1
Di-isopropyl Ether	< 25	8.1	26	1
Ethylbenzene	< 25	10	30	1
EDB (1,2-Dibromoethane)	< 25	1.3	4.2	1
Hexachlorobutadiene	< 25	13	43	1
Isopropylbenzene	< 25	11	34	1
p-Isopropyltoluene	< 25	11	34	1
Methylene Chloride	< 25	8	25	1
MTBE	< 25	6.1	19	1
Naphthalene	< 25	20	65	1
n-Propylbenzene	< 25	11	36	1
1,1,2,2-Tetrachloroethane	< 25	7.2	23	1
Tetrachloroethene	< 25	14	43	1
Toluene	< 25	11	36	1
1,2,3-Trichlorobenzene	< 25	19	60	1
1,2,4-Trichlorobenzene	< 25	16	51	1
1,1,1-Trichloroethane	< 25	12	40	1
1,1,2-Trichloroethane	< 25	2.2	7	1
Trichloroethene	< 25	10	31	1
Trichlorofluoromethane	< 25	25	83	1
124-Trimethylbenzene	< 25	7.7	25	1
1,3,5-Trimethylbenzene	< 25	15	47	1
Vinyl Chloride	< 25	18	57	1
m&p-Xylene	< 50	18	59	1
o-Xylene	< 25	6.6	21	1

Fluorobenzene Surrogate	104 % Rec.
1,4-Dichlorobutane Surrogate	99 % Rec.
Total % Solids	86.1

LOD = Limit of Detection
LOQ = Limit of Quantitation
NA = Not Applicable
QC Batch # 060311

GC #6

Authorized Signature



U.S. Oil Co., Inc.

Analytical Laboratory
1090 Kennedy Ave. Kimberly, WI 54136
920-735-8295

WI DNR Certified Lab #445027660

QC Summary

Method 8021 Volatile Organic Compounds

Project #: 23379XF
Sample ID: SS-6
Report Date: 10-Oct-97
Lab Code: 5018852D

ANALYTE	INITIAL CALIBRATION	KNOWN STANDARD	MATRIX SPIKE	REPLICATE SPIKE	BLANK	PID SURROGATE	HALL SURROGATE
Benzene	P	P	P	P	P	P	P
Bromobenzene	P	P	P	P	P	P	P
Bromodichloromethane	P	P	P	P	P	P	P
n-Butylbenzene	P	P	P	P	P	P	P
sec-Butylbenzene	P	P	P	P	P	P	P
tert-Butylbenzene	P	P	P	P	P	P	P
Carbon Tetrachloride	P	P	P	P	P	P	P
Chlorobenzene	P	P	P	P	P	P	P
Chloroethane	P	P	P	P	P	P	P
Chloroform	P	P	P	P	P	P	P
Chloromethane	P	F	P	F	P	P	P
2-Chlorotoluene	P	P	P	P	P	P	P
4-Chlorotoluene	P	P	P	P	P	P	P
1,2-Dibromo-3-Chloropropane	P	F	P	P	P	P	P
Dibromochloromethane	P	P	P	P	P	P	P
1,2-Dichlorobenzene	P	P	P	P	P	P	P
1,3-Dichlorobenzene	P	P	P	P	P	P	P
1,4-Dichlorobenzene	P	P	P	P	P	P	P
Dichlorodifluoromethane	P	F	F	P	P	P	P
1,1-Dichloroethane	P	P	P	P	P	P	P
1,2-Dichloroethane	P	P	P	P	P	P	P
1,1-Dichloroethene	P	P	P	P	P	P	P
cis-1,2-Dichloroethene	P	P	P	P	P	P	P
trans-1,2-Dichloroethene	P	P	P	P	P	P	P
1,2-Dichloropropane	P	P	P	P	P	P	P
1,3-Dichloropropane	P	P	P	P	P	P	P
2,2-DCP,cis-1,2-DCE	P	P	P	P	P	P	P
Di-isopropyl Ether	P	P	P	P	P	P	P
Ethylbenzene	P	P	P	P	P	P	P
EDB (1,2-Dibromoethane)	P	P	P	P	P	P	P
Hexachlorobutadiene	P	P	P	P	P	P	P
Isopropylbenzene	P	P	P	P	P	P	P
p-Isopropyltoluene	P	P	P	P	P	P	P
Methylene Chloride	P	P	P	P	P	P	P
MTBE	P	P	P	P	P	P	P
Naphthalene	P	P	P	P	P	P	P
n-Propylbenzene	P	P	P	P	P	P	P
1,1,2,2-Tetrachloroethane	P	F	P	P	P	P	P
Tetrachloroethene	P	P	P	P	P	P	P
Toluene	P	P	P	P	P	P	P
1,2,3-Trichlorobenzene	P	P	P	P	P	P	P
1,2,4-Trichlorobenzene	P	P	P	P	P	P	P
1,1,1-Trichloroethane	P	P	P	P	P	P	P
1,1,2-Trichloroethane	P	P	P	P	P	P	P
Trichloroethene	P	P	P	P	P	P	P
Trichlorofluoromethane	P	P	P	P	P	P	P
124-Trimethylbenzene	P	P	P	P	P	P	P
1,3,5-Trimethylbenzene	P	P	P	P	P	P	P
Vinyl Chloride	P	P	P	F	P	P	P
m&p-Xylene	P	P	P	P	P	P	P
o-Xylene	P	P	P	P	P	P	P

P = Passed QC limits. F = Failed QC limits. NA = Not Applicable

QC Batch # 060311

VOC analysis detected unidentified peaks.

"J" Flag: Analyte detected between LOD and LOQ.

Authorized Signature

CHAIN OF CUSTODY RECORD 5018852 № 28818

Contact Person BILL NOEL
Phone No. 920-468-1978 Office G.B.
Project No. 23379XF PO No.
Project Name CARVER BOAT TANK #3

Special Handling Request
- ☐ Rush
- ☐ Verbal
- ☐ Other

RECORD NUMBER 1 THROUGH 7

Laboratory US OIL
Contact Person CURTIS ZABEL
Phone No.
Results Due

Sample I.D.	Date 1997	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 Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
SS-1	9/26		X		2	SOIL	X						VOC (INCLUDING STYRENE); % SOLIDS	5018852 A
SS-3	↓		↓		↓	↓	↓						↓	B
SS-4	↓		↓		↓	↓	↓						↓	C
SS-6	↓		↓		↓	↓	↓						↓	D

Collected by: Jim Carlson	Date 9-26-97	Time 5:00P	Delivery by:	Date	Time
Received by: Leo Trudeau	Date 9/29/97	Time 7:45	Relinquished by: Leo Trudeau	Date 9/29/97	Time 4PM
Received by: K [illegible]	Date 9/29/97	Time 4pm	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 on ice, cooler, good condition

Final Disposition:

Comments (Weather Conditions, Precautions, Hazards):

PLEASE DISPOSE OF SS-2, SS-5

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

9/94cp10k

STS Consultants Ltd.
Consulting Engineers