02-16-000170
(closed site)

WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

1705 Tower Avenue
Superior, WI 54880
TELEPHONE 715-392-7988
TELEFAX 715-392-7993

December 13, 1996 IN REPLY REFER TO: 3500

Mr. John Gildersleeve
4776 Hermantown Road
Duluth, MN 55811

RE: Hughitt Slip Dock located in the E 1/2 of the SE 1/4 of S10-T49N-R14W, City of Superior, Douglas County.

Dear Mr. Gildersleeve:

This is a follow up to our conversation today regarding your proposal to construct a boat ramp and repair facility on the Hughitt Slip Dock. We reviewed the survey documents that you submitted and an original government plat of the area and determined that part of this dock is located on the upland and, therefore, the owner has riparian rights. This means the owner has the right to apply for a Chapter 30.12, Wisconsin Statutes permit to authorize and maintain the dock and we can proceed with the permit process.

Per our discussion today, I am enclosing a permit application for you to complete. Engineered plans of the both the existing structure and the improvements and documentation attesting to the structural integrity of the dock must be submitted with your application.

As you know, we are not able to make a permit decision on a project until the public has been properly notified and the Department has completed an internal review, however, I will attempt to identify some of our concerns with the project. Please keep in mind that other issues could arise and these comments are not meant to be comprehensive.

The dock must be structurally sound and you may be required to demonstrate that you are financially capable of maintaining the structure. Authorization of the dock and any added improvements, such as the boat ramp that we discussed, must meet the standards outlined in the authorizing statutes and codes. Particular attention should be given to navigational clearance and boater safety.

Proposals for this site must be related to navigation and any boat repair facility should be located on the upland portion of the dock. A stormwater permit will be required if a maintenance facility is constructed. Contact Anne Holy, DNR, 1705 Tower Avenue, Superior, WI 54880, 715-392-0805 for more information.

There are contaminated sediments on the dock and treatment, such as capping, may be required to protect the public from coming in contact with them. For more information about the

requirements, contact Chris Saari, DNR, PO Box 125, Brule, WI 54820, 715-372-4866.

Thank you for your early coordination on the project and feel free to contact me if you have any questions. Also, I would be happy to arrange a meeting with you and other DNR staff if you feel it would be helpful prior to finalizing your plans. I can be reached Monday-Thursday at the Brule Office (715)372-4866 or at the Superior Office on Friday (715)392-0807.

Sincerely,

Amy Mizia
Asst. Water Management Specialist

attach.

cc: John Gozdzialski - NWD
Anne Holy - Superior
Chris Saari - Brule

CARLSON
Florist & Greenhouses
"We outshine the rest"
4776 Hermantown Road
Duluth, MN 55811
(218) 722-3314

11-12-96

Wis Dept of Natural Resources
P.O. Box 125
Brule, Wis. 54820

Dear Mr Saari:

Please send me a copy of the closure letter for the Hughit Slip property in Superior, Wis., which we discussed on the phone on Thurs 11-7-96.

Thank you!

Yours truly,

John Gildersleave

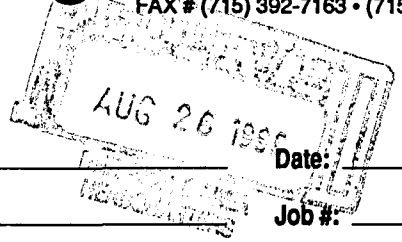
John Gildersleave

TRANSMITTAL

SINCE 1972

TWIN PORTS TESTING, inc.

1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
FAX # (715) 392-7163 • (715) 392-7114



To: Chris Saari
Wisconsin DNR
P.O. Box 125
Brule, Wisconsin 54820

Date: August 23, 1996
Job #: 599-95E.RA
Client: Norman & Dona Camenker
Project: Hughitt Slip Property

We are sending you:

- ✓ Enclosed
- ____ Separate Cover
- ____ By our Messenger
- ____ By your Messenger
- ____ Airmail
- ✓ 1st Class
- ____ Other
- ____ Shop Drawings
- ____ Other Drawings
- ____ Specifications
- ____ Other

# OF COPIES	REPORT/PROPOSAL ID	LATEST DATE	DESCRIPTION OR REMARKS
(2)	DNR Borehole	Abandonment	forms

THESE ARE TRANSMITTED as checked below:

- For approval ☑
- For your use ☑
- As requested ☐
- For review & comment ☐
- No Exception Taken ☐
- Make corrections noted ☐
- Revise & resubmit ☐
- Submit specified item ☐

Remarks:

DNR site ID # 02-16-000170

Any questions, please call me.

Thank you

COPIES TO:	Encl.	Trans.
Norman & Dona Camenker		

Sincerely,

Jon Hinkel
(218) 722-1911

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5B Rev. 12-91

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

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location: Spill Site 3
County: Douglas
NE 1/4 of SE 1/4 of Sec. 10 ; T. 49 N. R. 14 ☐ E ☑ W
(If applicable) N/A Gov't Lot N/A Grid Number
Grid Location N/A ft. ☐ N. ☐ S., N/A ft. ☐ E. ☐ W.
Civil Town Name
Street Address of Well: Hughitt Slip Property (no address)
City, Village: Superior, Wisconsin

(2) FACILITY NAME

Original Well Owner (If Known): Norman & Dona Camenker
Present Well Owner: Norman & Dona Camenker
Street or Route: 70 Highgate Road
City, State, Zip Code: Superior, Wisconsin 54880
Facility Well No. and/or Name (If Applicable): Hughitt Slip Property
WI Unique Well No.: _ _ _ _ _
Reason For Abandonment: Completion of project
Date of Abandonment: August 23, 1996

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On
(Date) May 29, 1996

☑ Monitoring Well
☐ Water Well
☐ Drillhole
☐ Borehole

Construction Report Available? ☐ Yes ☑ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☑ Other (Specify) Riser & screen assembly set in place during excavation backfilling.

Formation Type:
☑ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft.) 5' (From groundsurface) (riser) Casing Diameter (ins.) 2"

Casing Depth (ft.) no casing (riser extended 1' approx. below surface.)

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

(4) Depth to Water (Feet) approx. 1 foot (fluxuates)

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	N/A

If No, Explain: no casing - only screen & riser.

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

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Dump Bailer ☑ Other (Explain) gravity feed.

(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) Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks, Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
bentonite	Surface	1½'	approx. 1/10	N/A
* fill sand surrounding the well hole caved in below the water table - addition of bentonite below the water table was impractable.	1½	5'	—	—

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work
Jon Hinkel / Twin Ports Testing Inc.
Signature of Person Doing Work: Jon Hinkel
Date Signed: August 23, 1996
Street or Route: 728 Garfield Avenue
Telephone Number: (218) 722-1911
City, State, Zip Code: Duluth, Minnesota 55805

(10) FOR DNR OR COUNTY USE ONLY

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

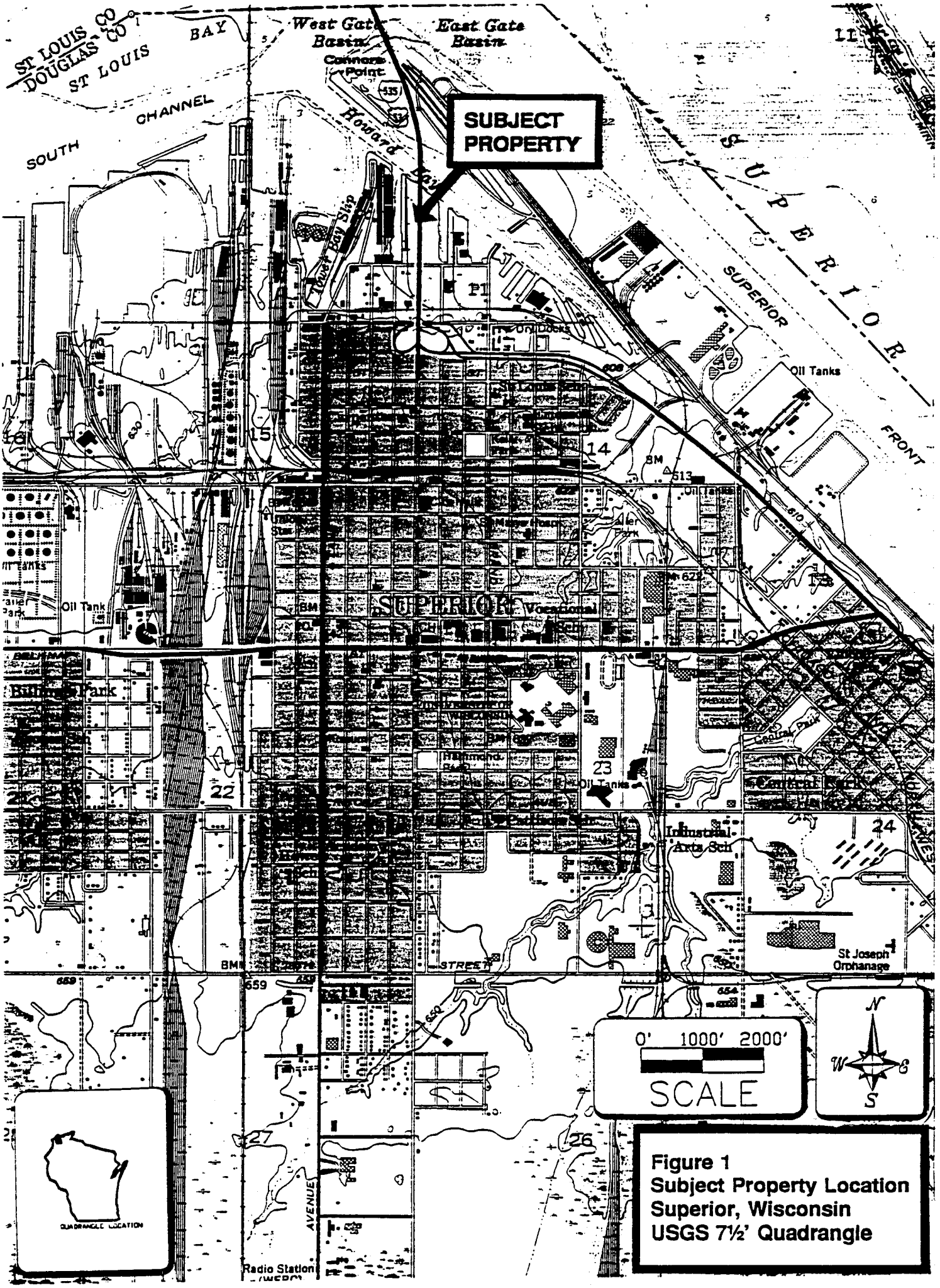


Figure 1
Subject Property Location
Superior, Wisconsin
USGS 7½' Quadrangle

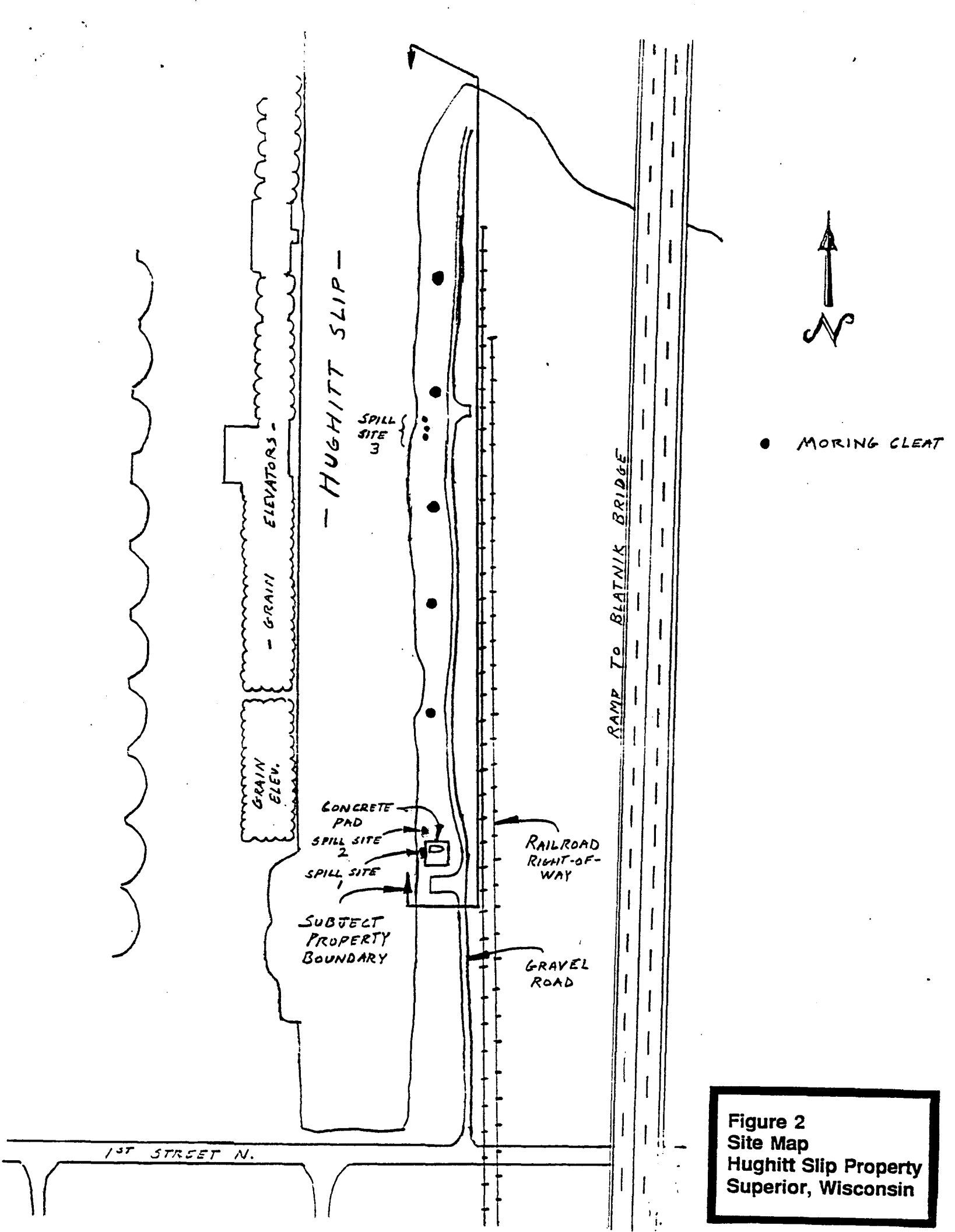


Figure 2
Site Map
Hughitt Slip Property
Superior, Wisconsin

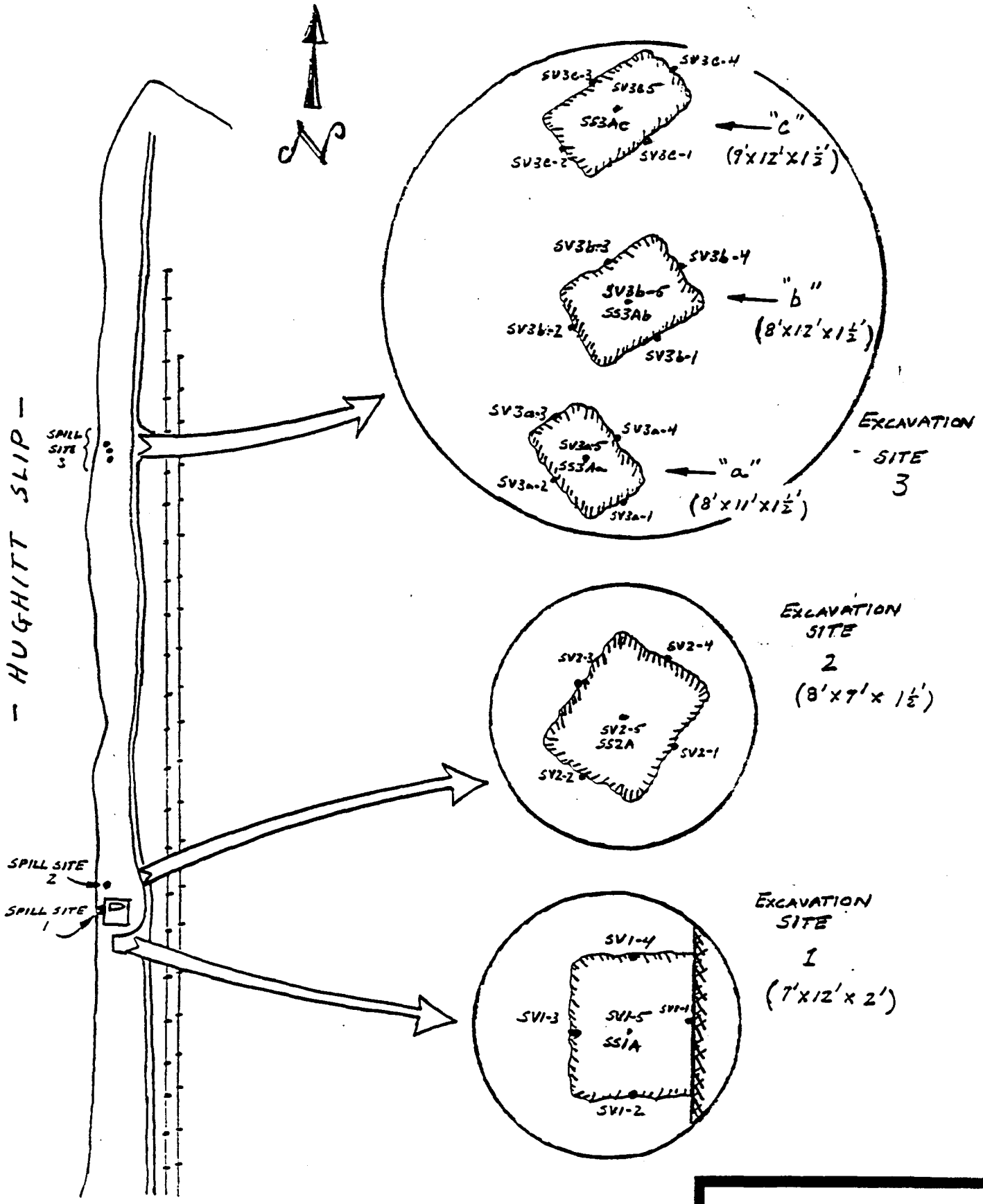
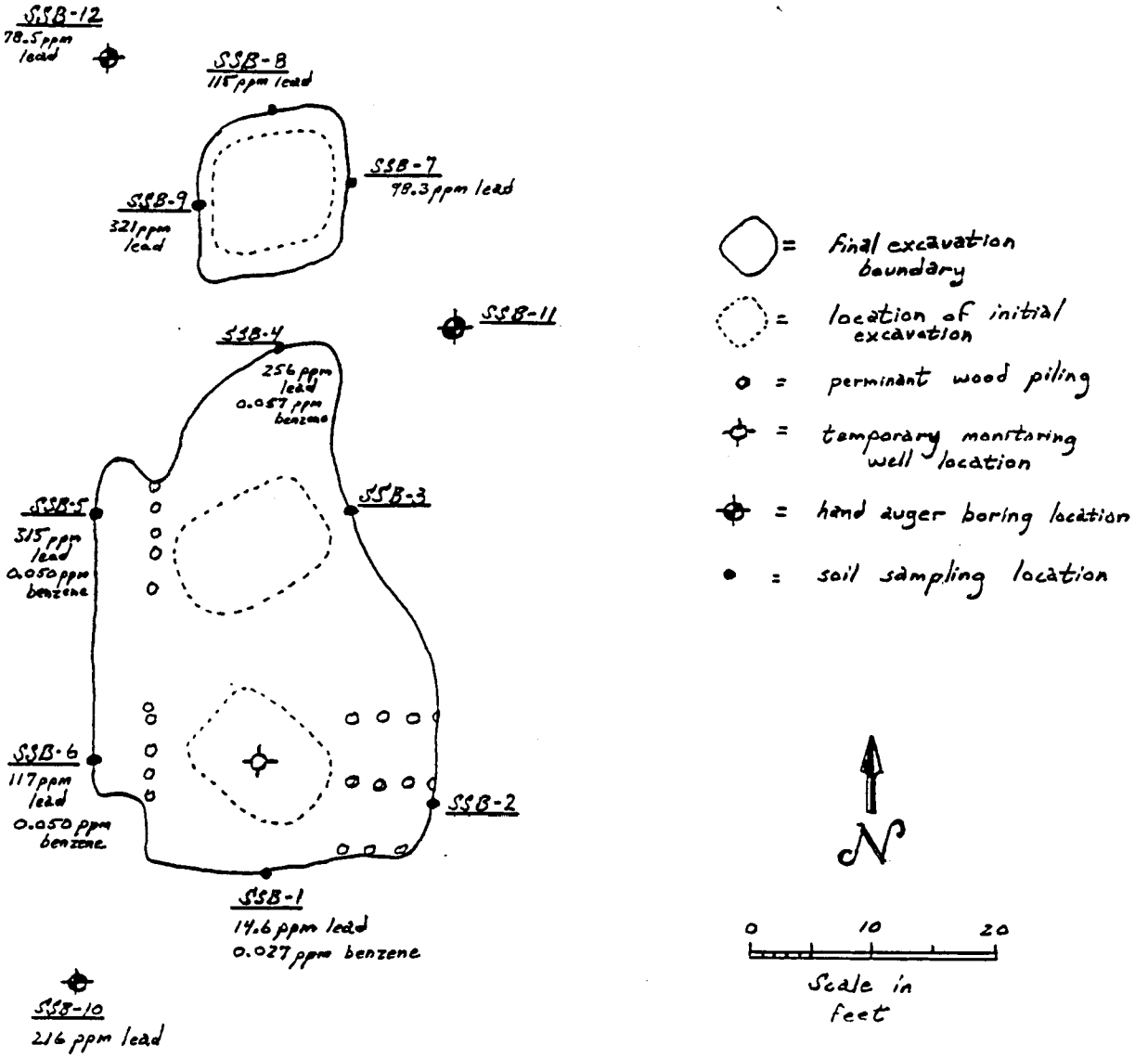


Figure 3
Initial Site Excavations
Hughitt Slip Property
Superior, Wisconsin



- HUGHITT SLIP -

SSB-13

Figure 4
Final Excavations/Additional Test Borings
Hughitt Slip Property
Superior, Wisconsin

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, District Director

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
TELEFAX 715-372-4836

August 9, 1996

FILE COPY

MR & MRS NORMAN CAMENKER
70 HIGHGATE COURT
SUPERIOR WI 54880

Re: Site Closure - Hughitt Slip Property (Case #02-16-000170), Superior, Wisconsin

Dear Mr. and Mrs. Camenker:

On December 8, 1995, the Department of Natural Resources provided a notice to you that the degree and extent of environmental contamination at the above named site was required to be investigated and remediated. We have since been informed that the required investigation and remediation has been accomplished.

On August 6, 1996, I presented this case to the Northwest District Close Out Committee for a determination as to whether or not the case qualified for close out under ch. NR 726, Wis. Adm. Code. After evaluating the investigative and remedial documentation provided by Twin Ports Testing, Inc. (TPT), the Committee concurred with your consultant's recommendation for no further action. However, the Committee specified two conditions for closure of the site:

1. Based on the lead concentrations remaining in soil here, this site has met the residual contaminant level for direct contact with lead at an industrial site, as described in s. NR 720.11, Wis. Adm. Code. If the intended future use of this site is other than an industrial property, further remediation of lead contaminated soil must be completed to meet the non-industrial residual contaminant level of s. NR 720.11.

2. If the temporary monitoring well remains at the site, it must be abandoned in accordance with the requirements of ch. NR 141, Wis. Adm. Code.

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

You should note that this letter does not constitute Department "certification" under s. 144.765 (2) (a) 3, Wis. Stats., as created by 1993 Wisconsin Act 453 (May 12, 1994). Persons who meet the definition of "purchaser" in s. 144.765 (1) (c), must receive Department pre-approval prior to conducting a site investigation in order to be eligible for the liability exemption under s. 144.765, Wis. Stats.

If you have any questions concerning this letter or the project in general, please do not hesitate to write or call me at 715/372-4866.

Sincerely,

Christopher A. Saari

Christopher A. Saari
Hydrogeologist

cc: Jon Hinkel - TPT
David Knight (by facsimile)

To Chris Saari

Date 8-8 Time 3:50 ☐ AM ☐ PM

WHILE YOU WERE OUT

M Dave Knight

of Realstar (FAX #) 715-394-5890

Phone ( ) _____

Area Code Number Extension

TELEPHONED		PLEASE CALL	
CALLED TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		URGENT	

RETURNED YOUR CALL ☐

Message re: Closure - Hazlett

Slip owned by Carlsons.

Dave needs a FAX on

Closure!

Operator

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, District Director

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
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August 9, 1996

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Sincerely,

Christopher A. Saari

Christopher A. Saari
Hydrogeologist

cc: Jon Hinkel - TPT
David Knight (by facsimile)

NWD CASE SUMMARY AND CLOSE OUT FORM

Close Out Option: Committee Fast Track DNR Project Manager: _____

Priority: High Medium Low Type of Release: LUST Spill Other _____ Unknown

Site Name: Hughitt Slip Property DNR Case No. 16-00170

Address/Location: North of N. 1st Street City/Vill/Tn: Superior, Wisconsin

Legal Description: NE 1/4, SE 1/4, Sec 10, T 49 N, R 14 (E/W) County: Douglas

Contaminant Type(s) or petroleum Quantity Released unknown

Tank Volume/Product: (if known):
spill sites — no tank involved

Date of Incident/Discovered: 12/8/95* Date Closure Form Submitted to DNR: 7/96

Depth to Groundwater/Flow Direction: approx. 2½ feet, assumed northwestward, but may vary locally. Perched Water? ___Y X N Depth: N/A

Potential Receptors: none identified

Site Assessment Consultant: Twin Ports Testing, Inc., 728 Garfield Avenue, Duluth MN

Investigation/Remediation Consultant: same as above

Certified Lab Testing Soils/Water: Lake Superior Laboratories (same address as above)

Form 4 Pending? ___Yes ✓No

Status of water supply wells on property?
No water supply wells appear to exist on the property or within ¼ mile of the property.

Status of water supply wells on adjoining properties?
No water supply wells appear to exist on adjoining properties.

LUST ANALYTICAL AND QUALITY ASSURANCE GUIDANCE (PUBL-SW-130 93) FOLLOWED X Y ___N

Form completed by:

Name: Jon Hinkel Firm Name: Twin Ports Testing Inc.

Address: 728 Garfield Avenue

City: Duluth State: MN Zip: 55802

Telephone Number: (218) 722-1911

(Signature) Jon Hinkel

* Contamination was identified and reported to the DNR on 8/29/95 by Twin Ports Testing, Inc. DNR files list the date of case opening as 12'8'95, however.

Case Summary (attach additional sheets if necessary):

Three sites of minor ground staining were discovered on the Hughitt Slip property in August, 1995 and reported to the DNR. Initial cleanup efforts involved scraping surface soils from the three sites, for disposal at a local thermal treatment plant. Following receipt of confirmation soil sample analyses results, additional excavation was conducted at the northern-most site (Site3), with the contaminated soil transported to the Jackson County Landfill for disposal during January and May, 1996. Analyses of soil samples collected from the final excavation boundaries indicated non-detectable to slight concentrations of DRO and benzene, non-detectable to elevated concentrations of lead, and very low concentrations of various other VOC and PAH parameters. Additional soil samples collected from hand-auger borings surrounding the Site 3 excavations were similarly analyzed, and served to aid in defining the extents of the remaining soil contamination. Slight concentrations of VOCs and moderately elevated concentrations of lead appear to lie between the eastern extents of the excavations and the Hughitt Slip face. Very low levels of PAH constituents appear throughout the area and are believed to be background chemistry rather than associated with a release.

Groundwater in the area has been shone to contain trace concentrations of DRO (113-492 ppb), no detectable concentrations of benzene, trace concentrations of three VOC parameters, a trace concentration of lead (11.1 ppb), and no detectable PAH parameters.

PRE-REMEDIATION OR INVESTIGATION

Extent Defined? ___Y ✓N (Phase II investigation data given below.)

Map Sample No.	Depth (feet)	DRO ~~(ppb)~~ ppm	GRO (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	PID (ppm)	Other (ppb) PCBs	Other ~~(ppb)~~ ppm lead
SS-1	1'	10,300	--	<	372	<	1090	51	<	222
SS-2	1'	45.1	--	<	127	<	373	0.0	<	92.9
SS-3	1'	456	--	88.3	168	120	386	5.0	<	46.5

*

* for other data, see lab reports

POST REMEDIATION SAMPLING RESULTS

Remedial Action Completed? ✓Y ___N

Description: Contaminated soil excavated and treated / landfilled.

Map Sample No.	Depth (feet)	DRO ~~(ppb)~~ ppm	GRO (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	PID (ppm)	Other ~~(ppb)~~ lead ppm	Other (ppb) *
SS1A	2'	5.10	--	<	<	<	<	4.9	<	
SS2A	2'	<	--	<	<	<	<	0.0	<	
SSB-1	2'	<	--	0.027	0.077	<	<	0.0	14.6	
SSB-2	2'	<	--	<	<	<	<	0.0	<	
SSB-3	2'	<	--	<	<	<	<	0.0	<	
SSB-4	2'	61.5	--	0.057	0.094	0.050	0.160	0.0	256	
SSB-5	2'	29.2	--	0.050	0.081	0.052	0.190	0.0	315	
SSB-6	2'	22.3	--	0.050	0.084	0.053	0.180	0.0	117	
SSB-7	2'	<	--	<	<	<	<	0.0	98.3	
SSB-8	2'	<	--	<	0.049	0.044	0.140	0.0	115	
SSB-9	2'	71.1	--	<	0.060	0.058	0.180	0.0	321	
SSB-10	2'	--	--	<	<	<	<	--	216	
SSB-11	2'	--	--	<	<	<	<	--	<	
SSB-12	2'	--	--	<	<	<	<	--	78.5	
SSB-13	2'	--	--	--	--	--	--	--	--	

* see lab reports for other detected parameters

Description of remedial action taken:

Contaminated soil was removed from the site by excavation, and disposed of at a local thermal treatment plant and a remote landfill. Excavations were backfilled using uncontaminated soil from off site.

Were Soils Excavated? ✓Y ___N Quantity: 146 cu yrds Disposal Method: thermal treatment / landfilling

Soil Disposal Form Attached? ✓Y ___N Final Disposal Location: Jackson County Landfill

GROUNDWATER ANALYTICAL RESULTS

GROUNDWATER: Extent Defined? ✓Y ___N ___NA

Clean Upgradient well(s)? ___Y___N
Clean Down-gradient well(s)? ___Y___N
Clean Side-gradient well(s)? ___Y___N
Non-detect gradient well(s)? ___Y___N

Remedial Action Completed? ✓Y ___N

Field Analyses? ___Y ___N Lab Analyses? ✓Y ___N No. of Sampling Points: 1

Permanent Wells? ___Y (No.___) ✓N Temporary Wells? ✓Y (No. 1) ___N

Preventive Action Limit exceeded? ✓Y___N (If yes, location) temporary monitoring well at Site 3

Enforcement Standard exceeded? ___Y ✓N (If yes, location)_____

Monitoring Well Location	Date MM/DD/YY	Groundwater Elevation	DRO (ppb)	GRO (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	Other (ppb) lead	Other (ppb) PAH
Site 3	1/17/96	--	492	<	<	<	<	<	<	--
Site 3	5/30/96	--	113	<	<	<	<	<	11.1	<

*

Remedial Action Taken (attach additional sheets if necessary):

No remedial action conducted with respect to the sites' groundwater.

< = concentration below lab. meth. detection limits

-- = analyses/tests not conducted.

*Note: Other VOC parameters detected 5/30/96:
n-Butylbenzene: 1.4 ppb
Naphthalene: 3 ppb

COMMITTEE RECOMMENDATION: **Further Work Needed:** **Date:** _____

DUE TO LEAD, AS AN INDUSTRIAL SITE

CASE CLOSE OUT: **Date:** 8-6-96

_____
(Signature)

_____
(Signature)

_____
(Signature)

_____
(Signature)

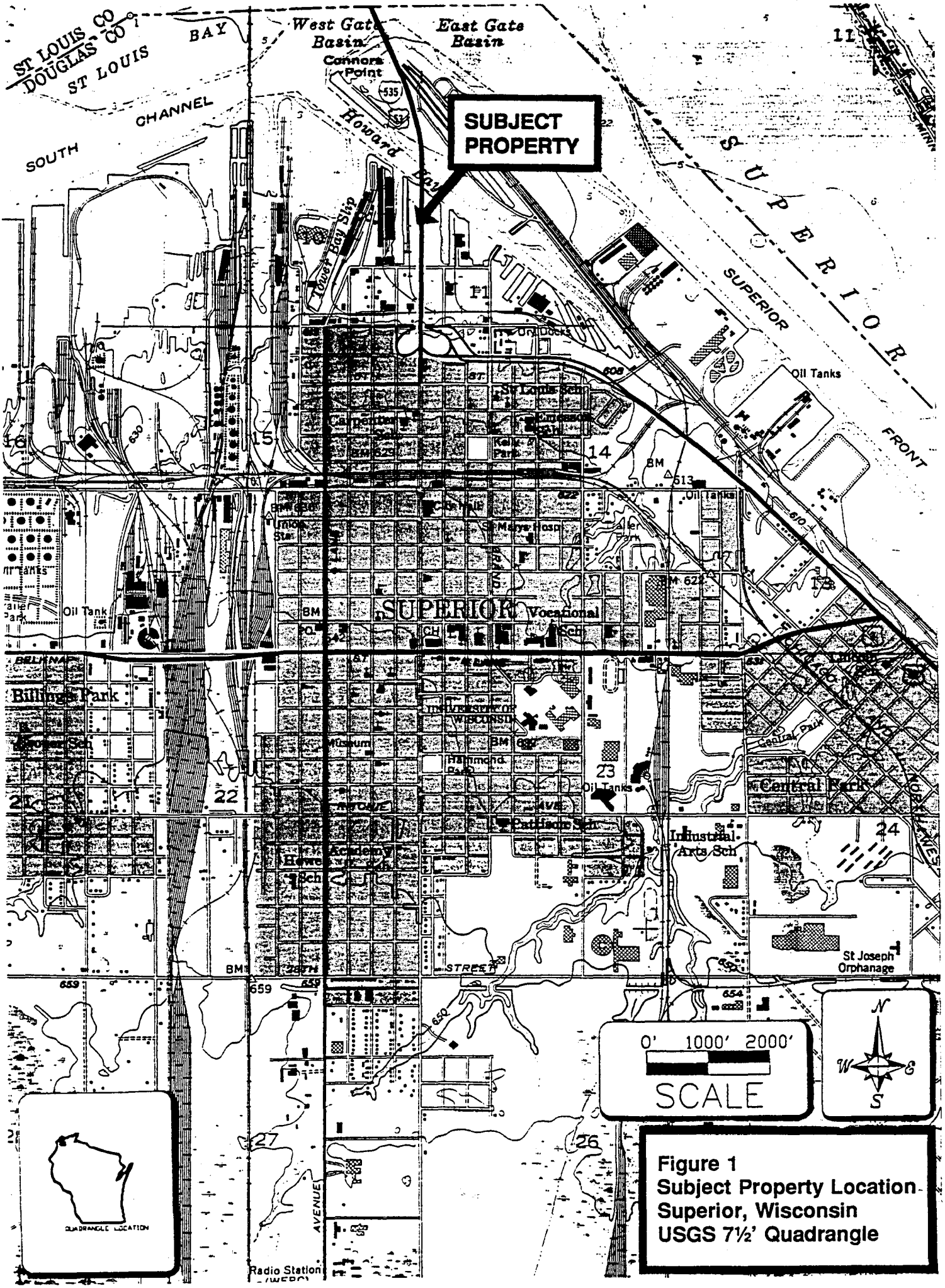


Figure 1
Subject Property Location
Superior, Wisconsin
USGS 7½' Quadrangle

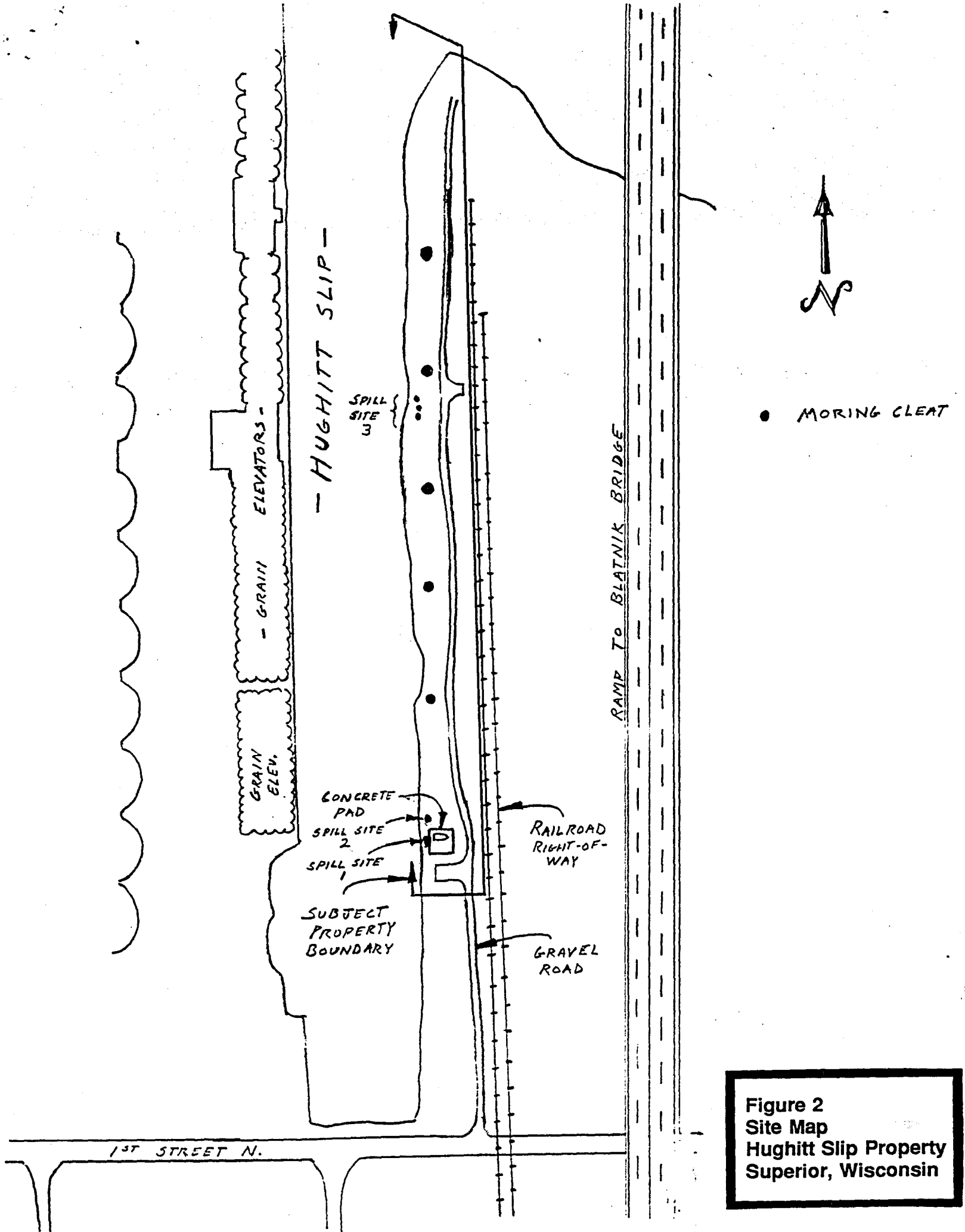


Figure 2
Site Map
Hughitt Slip Property
Superior, Wisconsin

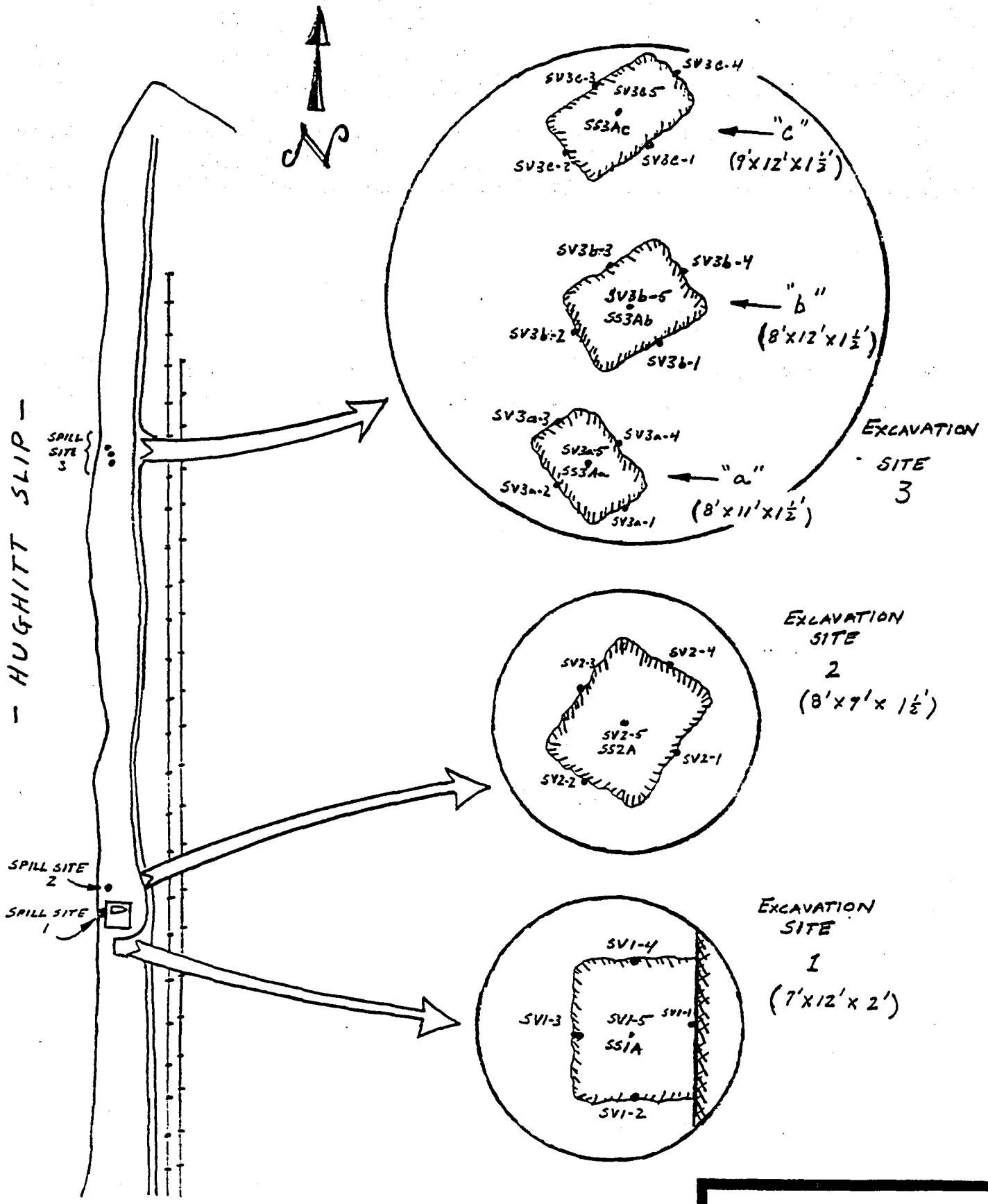
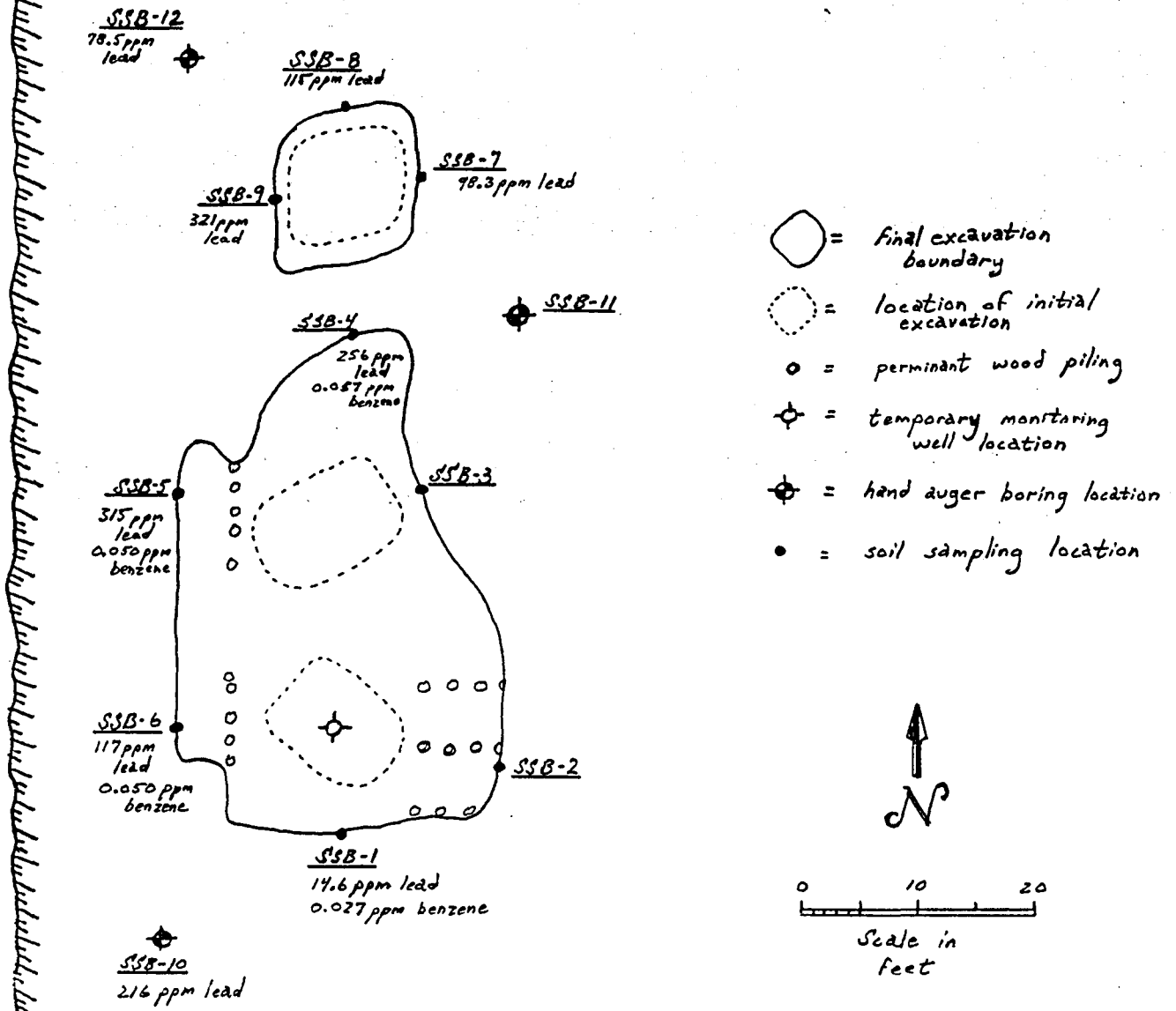


Figure 3
Initial Site Excavations
Hughitt Slip Property
Superior, Wisconsin



- Hughitt Slip -

SSB-13

Figure 4
Final Excavations/Additional Test Borings
Hughitt Slip Property
Superior, Wisconsin

Twin Ports Testing, Inc.

Soil Boring Field Log

Client: Norman & Dence Camunker

Project: Hughitt Slip Property

Boring Location: ft South of Excavations

Weather: Mild (>32°F) cloudy, windy

Boring #: SSB-13

TPT JOB #: 599-95E.RA

Page 1 of 1

Date Start: 3-11-96 Date End: 3-11-96

Crew Chief: RJ Hinkel

Helper: —

Rig: → Other Tech.: Hand Auger Boring

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0"-6"	PENETRATION RECORD: A 6"-12"	PENETRATION RECORD: B 12"-18"	PENETRATION RECORD: 18"-24"	N-Value (A+B) SP	PID	
SSB-13		0	2.3'	2.3	—	—	—	—	–	—	Black gravel (some coal?)
											¼-1' diameter w/ minor sand down
											to 2' deep; beyond med. grained
											brown sand
											SSB-13 collected for PAH only
											at 3:15pm
											Borehole abandoned w/
											bentonite 3:30pm

Surface Elevation: 0.0

Cave In Level: —

Remarks: 6" of frozen ground (location beneath snow)

Enviro. Test Type: —

WATER LEVEL OBSERVATIONS

WL1: 2.3'

WL2:

WL3:

WL4:

Water Table: 2.3'

Twin Ports Testing, Inc.

Soil Boring Field Log

Client Norman & Dona Comenker

Project Hughitt Slip Property

Boring Location North of Excavations

Weather Mild (>32°F) partly cloudy, wind 1

Boring # SSB-12

TPT JOB # 579-95E.RA

Page 1 of 1

Date Start 3-11-96 Date End 3-11-96

Crew Chief RJ Hinkel

Helper —

Rig → Other Tech. Hand Auger Borin

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0"-6"	A: 6"-12"	B: 12"-18"	18"-24"	N-Value (A+B) SP	PID	
SSB-12		0	2½	2					—	—	Med.-coarse grained black and brown sand, w ¼-1" dia gravel, rocks.
											SSB-12 collected at 2:45 pm; borehole abandoned w/ bentonite at 3:00 pm

Surface Elevation n.c.

Cave In Level —

Remarks Frost approx 3" deep (location beneath snow)

Enviro. Test Type —

WATER LEVEL OBSERVATIONS

WL1 2' feet deep

WL2

WL3

WL4

Water Table 2' (est)

Twin Ports Testing, Inc.

Soil Boring Field Log

Client Norman and Dona Cumenker

Project Hewlett Slip Property

Boring Location East of the excavations

Weather Mild (~32°F) windy, partly sunny

Boring # SSB-11

TPT JOB # 579-95E

Page 1 of 1

Date Start 3-11-96 Date End 3-11-96

Crew Chief Jon Hinkel

Helper —

Rig → Other Tech. (Hand Auger boring)

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0"-6"	A: 6"-12"	B: 12"-18"	18"-24"	N-Value (A+B) SP	PID	
SSB-11		0	2	2					—	—	Medium to coarse grained black and brown sand and ±-1" dia. gravel, minor wood
		2	3						—	—	Brown medium grained sand, coarse grained sand, minor gravel
											SSB-11 collected at 2.3' deep at 2:00 pm
											bore hole abandoned with bentonite 2:20 pm

Surface Elevation 0.0

Cave In Level —

Remarks Frost approx 1.8' deep

WATER LEVEL OBSERVATIONS

WL1 2.5'

WL2

WL3

WL4

Water Table 2.5'

Twin Ports Testing, Inc.

Soil Boring Field Log

Client Norman & Dena Camenker

Project Highitt Slip Site (579-95E.RA)

Boring Location 10' South of large Excavation

Weather Mild (≈35°F) windy, partly cloudy

Boring # SSB-10

TPT JOB # 579-95E.RA

Page 1 of 1

Date Start 3-11-96 Date End 3-11-96

Crew Chief RJH

Helper —

Rig → Other Tech. (Hand Auger)

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0"-6"	A: 6"-12"	B: 12"-18"	18"-24"	N-Value (A+B) SP	PID	
SSB-10		0	2.5'	2.5'					—	—	Medium to coarse grained sand - medium brown to dark brown, frozen to approx 1.6' depth, ± 1" dia gravel encountered at approx 1.7 depth, groundwater encountered at 2.2' depth
											SSB-10 collected at 12:45 pm
											hand auger boring filled w/ bentonite chips - 12:50 pm, - RJH

Surface Elevation 0.0

Cave In Level None

Remarks Frost extends to 1.6' dep.

Enviro. Test Type

WATER LEVEL OBSERVATIONS

WL1 2.2'

WL2

WL3

WL4

Water Table 2.2'

University of Wisconsin–Extension
Wisconsin Geological and Natural History Survey
3817 Mineral Point Road - Madison, WI 53705-5100
TELEPHONE 608/262.1705 - FAX 608/262.8086
James M. Robertson, *Director and State Geologist*

FACSIMILE TRANSMISSION COVER SHEET

DATE 5/28/96

FROM K. Massie-Ferch DIRECT TELEPHONE 608-262-9468

FAX NUMBER: 608/262-8086 MAIN OFFICE TELEPHONE: 608/262-1705

TO Jon Hinkel

FAX NUMBER 218-722-3295 TELEPHONE NUMBER 218-722-1911

ORGANIZATION/ADDRESS Twin Ports Testing, Inc.

NUMBER OF PAGES, INCLUDING COVER PAGE 3
[Please let us know if all pages are not received.]

COMMENTS:

You requested construction reports for
Sec 10 & 11, 49N, 14W
or geologic logs.
There are no records in this area.

TABLE 6
Groundwater Analysis Results
Hughitt Slip Property
Superior, Wisconsin

Sample # Collection Date	Parameter, Concentration (ppb)					
	DRO	VOCs			Lead	PAHs
		Toluene	n-Butylbenzene	Naphthalene		
WS-1 1/17/96	492	<	--	--	<	--
WS-2 5/30/96	113	<	1.4	3.0	11.1	<
Field Blank 5/30/96	--	2.1	<	<	--	--
Wisconsin DNR Enforcement Standard	--	343	--	40	15	various

ppb - parts per billion, equivalent to micrograms per kilogram (mg/kg)
DRO - diesel range organics
VOCs - volatile organic compounds
PAHs - polynuclear aromatic hydrocarbons
< - concentration less than laboratory method detection limits
-- - analysis not performed/enforcement standard not established

TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameter, Concentration (ppm)						
Location	Sample #	PAHs						
		Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methyl Naphthalene	Naphthalene	Phenanthrene	Pyrene
Excavation Enlargement Sites 1 & 2	SSB-1	--	--	--	--	--	--	--
	SSB-2	--	--	--	--	--	--	--
	SSB-3	0.0512	<	<0.0160	--	<	0.0186	0.0605
	SSB-4	--	--	--	--	--	--	--
	SSB-5	--	--	--	--	--	--	--
	SSB-6	0.447	<	<0.080	--	<	0.223	0.503
Excavation Enlargement Site 3	SSB-7	--	--	--	--	--	--	--
	SSB-8	--	--	--	--	--	--	--
	SSB-9	1.120	<	<0.160	--	<	0.713	1.290
Test Borings	SB-10	2.250	0.255	0.501	0.191	0.401	1.890	2.400
	SB-11	0.0253	<	<	0.00950	0.00517	0.0285	<
	SB-12	1.530	<	0.353	<	0.0609	0.275	0.964
	SB-13 (control)	0.0467	<	0.00710	.0163	0.00950	0.0406	<
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		--	--	--	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
MTBE = methyl tertiary butyl ether
< = concentration below laboratory method detection limit
VOCs = volatile organic compounds
DRO = diesel range organics
BB = butylbenzene
TCB = trychlorobenzene
-- = analysis not performed/DNR guideline does not exist

TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameters, Concentrations (ppm)					
Location	Sample #	PAHs					
		Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthane	Benzo[g,h,i]perylene	Chrysene	Dibenzo[a,h]anthrancene
Excavation Enlargement Sites 1 & 2	SSB-1	--	--	--	--	--	--
	SSB-2	--	--	--	--	--	--
	SSB-3	0.0237	0.0195	0.0116	<0.0640	0.0363	<0.040
	SSB-4	--	--	--	--	--	--
	SSB-5	--	--	--	--	--	--
	SSB-6	0.134	0.117	0.0614	<0.320	0.235	<0.200
Excavation Enlargement Site 3	SSB-7	--	--	--	--	--	--
	SSB-8	--	--	--	--	--	--
	SSB-9	0.387	0.249	0.146	<0.640	0.618	<0.400
Test Borings	SB-10	0.892	0.734	0.270	<	<	<
	SB-11	0.00887	0.00735	0.00347	<	<	<
	SB-12	0.610	0.476	0.172	0.302	0.508	<
	SB-13 (control)	0.0163	0.0145	0.00696	0.00429	<	<
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		--	--	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
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TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameter, Concentration (ppm)							
Location	Sample #	VOCs				Lead	PAHs		
		n-BB	Naphthalene	1,2,3-TCB	1,2,4-TCB		Acenaphthene	Anthracene	Benzo[a]anthracene
Excavation Enlargement Sites 1 & 2	SSB-1	--	--	--	--	14.6	--	--	--
	SSB-2	--	--	--	--	<	--	--	--
	SSB-3	--	--	--	--	<	<	<	0.0260
	SSB-4	--	--	--	--	256	--	--	--
	SSB-5	--	--	--	--	315	--	--	--
	SSB-6	--	--	--	--	117	0.419	0.0324	0.156
Excavation Enlargement Site 3	SSB-7	--	--	--	--	98.3	--	--	--
	SSB-8	--	--	--	--	115	--	--	--
	SSB-9	--	--	--	--	321	0.859	0.0807	0.421
Test Borings	SB-10	0.049	0.037	0.035	<	216	<	0.473	0.708
	SB-11	0.035	<	<	0.040	<	<	<	<
	SB-12	0.042	0.026	0.027	0.048	78.5	<	0.0930	0.392
	SB-13 (control)	--	--	--	--	--	<	<	0.00829
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		--	--	--	--	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
MTBE = methyl tertiary butyl ether
< = concentration below laboratory method detection limit
VOCs = volatile organic compounds
DRO = diesel range organics
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-- = analysis not performed/DNR guideline does not exist

TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameter, Concentration (ppm)								
Location	Sample #	DRO	VOCs							
			Benzene	Toluene	Ethylbenzene	Xylenes	1,3,5-TMB	1,2,4-TMB	MTBE	sec-BB
Excavation Enlargement Area of Sites 3a & 3b	SSB-1	<	0.027	0.077	<	<	<	<	0.098	--
	SSB-2	<	<	<	<	<	<	<	<	--
	SSB-3	<	<	<	<	<	<	<	<	--
	SSB-4	61.5	0.057	0.094	0.050	0.160	0.036	0.052	<	--
	SSB-5	29.2	0.050	0.081	0.052	0.190	0.047	0.064	<	--
	SSB-6	22.3	0.050	0.084	0.053	0.180	0.043	0.059	<	--
Excavation Enlargement Site 3c	SSB-7	<	<	<	<	<	<	<	<	--
	SSB-8	<	<	0.049	0.044	0.140	0.039	0.051	<	--
	SSB-9	71.1	<	0.060	0.058	0.180	0.053	0.061	<	--
Test Borings	SSB-10	--	<	<	<	<	<	0.026	--	0.026
	SSB-11	--	<	<	<	<	<	<	--	<
	SSB-12	--	<	<	<	<	<	<	--	<
	SB-13 (control)	--	--	--	--	--	--	--	--	--
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		100	0.0055	1.500	2.900	4.100	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
MTBE = methyl tertiary butyl ether
< = concentration below laboratory method detection limit
VOCs = volatile organic compounds
DRO = diesel range organics
BB = butylbenzene
TCB = trychlorobenzene
-- = analysis not performed/DNR guideline does not exist

Soil Vapor Sample (Sample #)	Depth in Feet	PID Reading in ppm
SV-22	2.5	0.0
SV-23	1.5	0.0
SV-24	2.5	0.0
SV-25	1.5	0.0
SV-26	2.5	0.0
SV-27	1.5	0.0
SV-28	2.5	0.0
SV-29	1.5	0.0
SV-30	2.5	0.0
SV-31	1.5	0.0
SV-32	2.5	0.0
SV-33	1.5	0.0
SV-34	2.5	0.0
SV-35	1.5	0.0
SV-36	2.5	0.0

Notes:
PID = photoionization detector
ppm = parts per million organic vapors
* = area excavated following sample collection and field screening

During the field work, the water table appeared to lie approximately 2.5 feet below the surface.

TABLE 4
Field Screening Results
Final Excavations
Hughitt Slip Property
Superior, Wisconsin

Soil Vapor Sample (Sample #)	Depth in Feet	PID Reading in ppm
SV-1	1.5	0.0
SV-2	2.5	0.0
SV-3	1.5	0.0
SV-4	2.5	0.0
SV-5	1.5	0.0
SV-6	2.5	0.0
SV-7	1.5	0.0
SV-8	2.5	0.0
SV-9	1.5	146*
SV-10	2.5	90.0*
SV-11	1.5	40.0*
SV-12	2.5	50.7*
SV-13	1.5	5.1*
SV-14	2.5	1.1*
SV-15	1.5	0.0
SV-16	2.5	0.4
SV-17	1.5	0.0
SV-18	2.5	0.0
SV-19	1.5	0.0*
SV-20	2.5	29.9*
SV-21	1.5	0.0

TABLE 3
Analysis Results
Initial Excavations
Hughitt Slip Property
Superior, Wisconsin

Location	Soil Sample Number	Parameter, concentration (ppm)								
		DRO	Benzene	Toluene	Ethylbenzene	Xylenes	1,3,5-TMB	1,2,4-TMB	MTBE	Lead
Site 1	SS1A	5.10	< (at 0.005)	<	<	<	<	<	<	<
Site 2	SS2A	<	< (at 0.005)	<	<	<	<	<	<	<
Site 3a	SS3Aa	4240	< (at 0.025)	0.765	0.238	2.51	1.31	8.41	<	254
Site 3b	SS3Ab	11.8	0.019	0.219	<	<	<	<	<	257
Site 3c	SS3Ac	8.26	< (at 0.010)	<	<	<	<	<	<	160
Wisconsin DNR Interim Soil Cleanup Guideline/Maximum Allowable Leachable Metal Concentration		100	0.0055	1.5	2.9	4.1	--	--	--	--

DRO - diesel range organics
MTBE - methyl tertiary butyl ether
(at___) - laboratory method detection limit
ppm - parts per million, equivalent to milligrams per kilogram or mg/kg
< - concentration below laboratory method detection limits
TMB - trimethylbenzene

Table 2
Field Screening Results, Initial Excavations
Hughitt Slip Property
Superior, Wisconsin

Location	Sample Number	Organic Vapor Concentration (ppm)
Excavation Site 1	SV1-1	31.5
	SV1-2	67.0
	SV1-3	71.7
	SV1-4	12.8
	SV1-5	4.9
Excavation Site 2	SV2-1	0.0
	SV2-2	0.0
	SV2-3	0.0
	SV2-4	0.0
	SV2-5	0.0
Excavation Site 3a	SV3a-1	11.3
	SV3a-2	96.2
	SV3a-3	127
	SV3a-4	134
	SV3a-5	155
Excavation Site 3b	SV3b-1	3.3
	SV3b-2	2.7
	SV3b-3	2.4
	SV3b-4	2.1
	SV3b-5	3.9
Excavation Site 3c	SV3c-1	3.3
	SV3c-2	1.8
	SV3c-3	1.8
	SV3c-4	1.5
	SV3c-5	1.5

Note:
- Organic vapor concentrations provided in parts per million (ppm)
- All soil vapor samples were collected at the excavation bases, 1½ to 2½ feet below the surface.

Table 1
Phase II Soil Analysis Results
Hughit Slip Property
Superior, Wisconsin

Parameter	Soil Sample Number Sampling Location Concentration in ppm			Wisconsin DNR Interim Soil Cleanup Guideline	Concentration Requiring Additional Analyses (TCLP)
	SS1 Site 1 adjacent to concrete pad	SS2 Site 2 north of concrete pad	SS3 Site 3 near vehicle turnaround		
Diesel Range Organics	10,300	45.1	456	100	--
Toluene	0.372	<	<	1.5	--
Xylenes	1.09	0.373	0.386	4.1	--
1,3,5-trimethylbenzene	0.990	<	<	--	--
1,2,4-trimethylbenzene	0.874	<	0.232	--	--
Lead	222	92.9	46.5	--	100
Chromium	16.1	65.1	9.05	--	100
Lead (TCLP analysis)	<	--	--	5.0	N/A

ppm = parts per million, equivalent to milligrams per kilogram, or mg/kg
< = concentration below laboratory method detection limits
-- = guideline not established/analysis not performed
TCLP = toxicity characteristics leaching procedure

Kimmes

APPLICATION TO TREAT OR DISPOSE OF PETROLEUM CONTAMINATED SOIL
ASPHALT PLANT OR OTHER TYPE OF THERMAL TREATMENT UNIT

Form 4400-149

Received 11/27 from Lakehead Truck -R

This form is required by the Department of Natural Resources for leaking underground storage tank sites to ensure that petroleum contaminated soil is treated or disposed of in compliance with NR 500-540, NR 158, and NR 419, Wis. Adm. Code. Failure to comply with applicable statutes and administrative rules may lead to violations of subchapters III and IV of ch. 144 Wis. Stats. and may result in forfeitures of not less than $10 or more than $25,000 for each violation, pursuant to ss. 144.426(1), 144.74 (1), and 144.99, Wis. Stats., or fines of not less than $100 or more than $150,000 or imprisonment for not more than 10 years, or both, pursuant to s. 144.74 (2), Wis. Stats. Each day of a continuing violation constitutes a separate violation. Department approval of this form is required prior to site remediation, except for soils to be buried in landfills.

DIRECTIONS: 1) Complete parts I and II. 2) Submit the application to the DNR project manager for approval. 3) Have the treatment facility complete part III of the approved form after the soil has been treated. 4) Return the ORIGINAL form to the DNR project manager. 5) Keep a copy for your files.

ALL SITES MUST COMPLETE PART I.

Part I. Source of Soil

Site/Facility Name: Hughitt Slip Property

Site I.D. # (for DNR use only):

Site Address: (no street address; see attached map)

Contact Name: Norman & Donna Camenker

City, State, Zip Code: Superior, Wisconsin 54880

1/4, 1/4, Section, Township, and Range: NE¼ SE¼ Sec. 10, T49N, R14W

The information on this form is accurate to the best of my knowledge.

Signature of Soil Generator: Donna Camenker

Telephone Number (include area code): (715) 392-5457

Consulting Firm	Contact	Telephone Number
Twin Ports Testing, Inc.	Jon Hinkel	(218) 722-1911

Estimated Volume Contaminated Soil: 18 Tons/cubic yards (circle one)

Soil Type (USCS):
- ___ sand (SP, SW)
- ✓ silty/clayey sands (SM, SC)
- ___ silt (ML, MH, OL)
- ___ clay (CI, CH, OH)
- ✓ gravel (GC, GM, GP, GW)
- ___ peat (PT)

fill materi mixture o soils

Type of Petroleum Contamination (Circle):

Gasoline Diesel Fuel/#2 Fuel Oil

Other Waste Oil

Distance to Nearest Residence/Business: 800 ft.

Contaminant concentration:

One screened sample for each 15 yds³ and one laboratory analysis for each 300 yds³ of contaminated soil when the field instrument *registers contamination* OR one laboratory analysis for each 100 yds³ when the field instrument *does not register contamination* on soil shown to be contaminated during the site investigation/excavation or stockpiling. PLEASE ATTACH A TABLE LISTING RESULTS OF BOTH FIELD SCREENING AND LAB ANALYSES, AND INCLUDE SUPPORTING LAB REPORTS, IN ADDITION TO THE TPH AND BENZENE INFORMATION REQUESTED BELOW. NOTE: DILHR requires a minimum of 3 laboratory samples on excavated soil for PECFA claims.

Total Benzene in soil to be remediated (attach calculations): < 0.010 lbs

Total Petroleum Hydrocarbons(TPH) in soil to be remediated (attach calculations): 519 lbs

Total TPH as: diesel range organics

SERIAL NUMBER
№ 14301

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client TPT Env. Dept. Report To Jon Hinkel

Address Duluth Office

Bill To 599-95E.RA

Phone — Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Remarks

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: VOC	Analyses: lead	Analyses: PAH	LSL No.
SSB-10	3-11-96	12:45 pm			✓	4		✓	✓	✓	1478
SSB-11	3-11-96	2:00 pm			✓	4		✓	✓	✓	1479
SSB-12	3-11-96	2:45 pm			✓	4		✓	✓	✓	1480
SSA-13	3-11-96	3:15 pm			✓	2				✓	1481

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R.J. Hinkel 4:00 pm	3-11-96	L Hanson			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
SSB-10

Chem. Lab ID: 1478-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Soil
Collected: 03/11/96
Received: 03/11/96
Analyzed: 03/11/96
Reported: 03/26/96

Analysis EPA 8021

Dichlorodifluoromethane	<25	ug/kg	1,1,2,2-Tetrachloroethane	<25	ug/kg
Chloromethane	<25	ug/kg	1,2,3-Trichloropropane	<25	ug/kg
Vinyl Chloride	<25	ug/kg	n-Propylbenzene	<25	ug/kg
Bromomethane	<25	ug/kg	Bromobenzene	<25	ug/kg
Chloroethane	<25	ug/kg	1,3,5-Trimethylbenzene	<25	ug/kg
Trichlorofluoromethane	<25	ug/kg	2-Chlorotoluene	<25	ug/kg
1,1-Dichloroethene	<25	ug/kg	4-Chlorotoluene	<25	ug/kg
Methylene Chloride	<25	ug/kg	tert-Butylbenzene	<25	ug/kg
trans-1,2-Dichloroethene	<25	ug/kg	1,2,4-Trimethylbenzene	26	ug/kg
1,1-Dichloroethane	<25	ug/kg	sec-Butylbenzene	26	ug/kg
2,2-Dichloropropane	<25	ug/kg	p-Isopropyltoluene	<25	ug/kg
cis-1,2-Dichloroethene	<25	ug/kg	1,3-Dichlorobenzene	<25	ug/kg
Chloroform	<25	ug/kg	1,4-Dichlorobenzene	<25	ug/kg
Bromochloromethane	<25	ug/kg	n-Butylbenzene	49	ug/kg
1,1,1-Trichloroethane	<25	ug/kg	1,2-Dichlorobenzene	<25	ug/kg
1,1-Dichloropropene	<25	ug/kg	1,2-Dibromo-3-chloropropane	<25	ug/kg
Carbon Tetrachloride	<25	ug/kg	1,2,4-Trichlorobenzene	<25	ug/kg
Benzene	<5.0	ug/kg	Hexachlorobutadiene	<25	ug/kg
1,2-Dichloroethane	<25	ug/kg	Naphthalene	37	ug/kg
Trichloroethene	<25	ug/kg	1,2,3-Trichlorobenzene	35	ug/kg
1,2-Dichloropropane	<25	ug/kg	Lead	216000	ug/kg
Bromodichloromethane	<25	ug/kg	Moisture	31.50	%
Dibromomethane	<25	ug/kg			
Toluene	<25	ug/kg			
1,1,2-Trichloroethane	<25	ug/kg			
1,3-Dichloropropane	<25	ug/kg			
Tetrachloroethene	<25	ug/kg			
Dibromochloromethane	<25	ug/kg			
1,2-Dibromoethane	<25	ug/kg			
Chlorobenzene	<25	ug/kg			
Ethylbenzene	<25	ug/kg			
1,1,1,2-Tetrachloroethane	<25	ug/kg			
m- & p-Xylene	<50	ug/kg			
o-Xylene	<25	ug/kg			
Styrene	<25	ug/kg			
Isopropylbenzene	<25	ug/kg			
Bromoform	<25	ug/kg			

Remarks

Lead: date analyzed 03/22/96.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
SSB-11

Chem. Lab ID: 1479-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Soil
Collected: 03/11/96
Received: 03/11/96
Analyzed: 03/11/96
Reported: 03/26/96

Analysis EPA 8021

Dichlorodifluoromethane	<25	ug/kg	1,1,2,2-Tetrachloroethane	<25	ug/kg
Chloromethane	<25	ug/kg	1,2,3-Trichloropropane	<25	ug/kg
Vinyl Chloride	<25	ug/kg	n-Propylbenzene	<25	ug/kg
Bromomethane	<25	ug/kg	Bromobenzene	<25	ug/kg
Chloroethane	<25	ug/kg	1,3,5-Trimethylbenzene	<25	ug/kg
Trichlorofluoromethane	<25	ug/kg	2-Chlorotoluene	<25	ug/kg
1,1-Dichloroethene	<25	ug/kg	4-Chlorotoluene	<25	ug/kg
Methylene Chloride	<25	ug/kg	tert-Butylbenzene	<25	ug/kg
trans-1,2-Dichloroethene	<25	ug/kg	1,2,4-Trimethylbenzene	<25	ug/kg
1,1-Dichloroethane	<25	ug/kg	sec-Butylbenzene	<25	ug/kg
2,2-Dichloropropane	<25	ug/kg	p-Isopropyltoluene	<25	ug/kg
cis-1,2-Dichloroethene	<25	ug/kg	1,3-Dichlorobenzene	<25	ug/kg
Chloroform	<25	ug/kg	1,4-Dichlorobenzene	<25	ug/kg
Bromochloromethane	<25	ug/kg	n-Butylbenzene	35	ug/kg
1,1,1-Trichloroethane	<25	ug/kg	1,2-Dichlorobenzene	<25	ug/kg
1,1-Dichloropropene	<25	ug/kg	1,2-Dibromo-3-chloropropane	<25	ug/kg
Carbon Tetrachloride	<25	ug/kg	1,2,4-Trichlorobenzene	40	ug/kg
Benzene	<5.0	ug/kg	Hexachlorobutadiene	<25	ug/kg
1,2-Dichloroethane	<25	ug/kg	Naphthalene	<25	ug/kg
Trichloroethene	<25	ug/kg	1,2,3-Trichlorobenzene	<25	ug/kg
1,2-Dichloropropane	<25	ug/kg	Lead	<5000	ug/kg
Bromodichloromethane	<25	ug/kg	Moisture	19.80	%
Dibromomethane	<25	ug/kg			
Toluene	<25	ug/kg			
1,1,2-Trichloroethane	<25	ug/kg			
1,3-Dichloropropane	<25	ug/kg			
Tetrachloroethene	<25	ug/kg			
Dibromochloromethane	<25	ug/kg			
1,2-Dibromoethane	<25	ug/kg			
Chlorobenzene	<25	ug/kg			
Ethylbenzene	<25	ug/kg			
1,1,1,2-Tetrachloroethane	<25	ug/kg			
m- & p-Xylene	<50	ug/kg			
o-Xylene	<25	ug/kg			
Styrene	<25	ug/kg			
Isopropylbenzene	<25	ug/kg			
Bromoform	<25	ug/kg			

Remarks

Lead: date analyzed 03/22/96.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
SSB-12

Chem. Lab ID: 1480-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Soil
Collected: 03/11/96
Received: 03/11/96
Analyzed: 03/11/96
Reported: 03/26/96

Analysis EPA 8021

Dichlorodifluoromethane	<25	ug/kg	1,1,2,2-Tetrachloroethane	<25	ug/kg
Chloromethane	<25	ug/kg	1,2,3-Trichloropropane	<25	ug/kg
Vinyl Chloride	<25	ug/kg	n-Propylbenzene	<25	ug/kg
Bromomethane	<25	ug/kg	Bromobenzene	<25	ug/kg
Chloroethane	<25	ug/kg	1,3,5-Trimethylbenzene	<25	ug/kg
Trichlorofluoromethane	<25	ug/kg	2-Chlorotoluene	<25	ug/kg
1,1-Dichloroethene	<25	ug/kg	4-Chlorotoluene	<25	ug/kg
Methylene Chloride	<25	ug/kg	tert-Butylbenzene	<25	ug/kg
trans-1,2-Dichloroethene	<25	ug/kg	1,2,4-Trimethylbenzene	<25	ug/kg
1,1-Dichloroethane	<25	ug/kg	sec-Butylbenzene	<25	ug/kg
2,2-Dichloropropane	<25	ug/kg	p-Isopropyltoluene	<25	ug/kg
cis-1,2-Dichloroethene	<25	ug/kg	1,3-Dichlorobenzene	<25	ug/kg
Chloroform	<25	ug/kg	1,4-Dichlorobenzene	<25	ug/kg
Bromochloromethane	<25	ug/kg	n-Butylbenzene	42	ug/kg
1,1,1-Trichloroethane	<25	ug/kg	1,2-Dichlorobenzene	<25	ug/kg
1,1-Dichloropropene	<25	ug/kg	1,2-Dibromo-3-chloropropane	<25	ug/kg
Carbon Tetrachloride	<25	ug/kg	1,2,4-Trichlorobenzene	48	ug/kg
Benzene	<5.0	ug/kg	Hexachlorobutadiene	<25	ug/kg
1,2-Dichloroethane	<25	ug/kg	Naphthalene	26	ug/kg
Trichloroethene	<25	ug/kg	1,2,3-Trichlorobenzene	27	ug/kg
1,2-Dichloropropane	<25	ug/kg	Lead	78500	ug/kg
Bromodichloromethane	<25	ug/kg	Moisture	28.10	%
Dibromomethane	<25	ug/kg			
Toluene	<25	ug/kg			
1,1,2-Trichloroethane	<25	ug/kg			
1,3-Dichloropropane	<25	ug/kg			
Tetrachloroethene	<25	ug/kg			
Dibromochloromethane	<25	ug/kg			
1,2-Dibromoethane	<25	ug/kg			
Chlorobenzene	<25	ug/kg			
Ethylbenzene	<25	ug/kg			
1,1,1,2-Tetrachloroethane	<25	ug/kg			
m- & p-Xylene	<50	ug/kg			
o-Xylene	<25	ug/kg			
Styrene	<25	ug/kg			
Isopropylbenzene	<25	ug/kg			
Bromoform	<25	ug/kg			

Remarks

Lead: date analyzed 03/22/96.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1478-96LS	1479-96LS	1480-96LS
Sample Type	Soil	Soil	Soil
Collected	03/11/96	03/11/96	03/11/96
Received	03/11/96	03/11/96	03/11/96
Reported	03/26/96	03/26/96	03/26/96
Sample Description	SSB-10	SSB-11	SSB-12

Analysis	Date Analyzed	RL			
Acenaphthene	03/19/96	5.70 ug/kg	ND	ND	ND
Acenaphthylene	03/19/96	1.20 ug/kg	ND	ND	ND
Anthracene	03/19/96	9.00 ug/kg	473 ug/kg	ND	93.0 ug/kg
Benzo[a]anthracene	03/19/96	4.00 ug/kg	708 ug/kg	ND	392 ug/kg
Benzo[a]pyrene	03/19/96	4.00 ug/kg	892 ug/kg	8.87 ug/kg	610 ug/kg
Benzo[b]fluoranthene	03/19/96	2.20 ug/kg	734 ug/kg	7.35 ug/kg	476 ug/kg
Benzo[k]fluoranthene	03/19/96	1.70 ug/kg	270 ug/kg	3.47 ug/kg	172 ug/kg
Benzo[g,h,i]perylene	03/19/96	4.50 ug/kg	ND	ND	302 ug/kg
Chrysene	03/19/96	1.70 ug/kg	ND	ND	508 ug/kg
Dibenzo[a,h]anthracene	03/19/96	6.20 ug/kg	ND	ND	ND
Fluoranthene	03/19/96	6.20 ug/kg	2250 ug/kg	25.3 ug/kg	1530 ug/kg
Fluorene	03/19/96	3.40 ug/kg	255 ug/kg	ND	ND
Indeno[1,2,3-cd]pyrene	03/19/96	6.70 ug/kg	501 ug/kg	ND	353 ug/kg
1-Methyl Naphthalene	03/19/96	1.20 ug/kg	191 ug/kg	9.50 ug/kg	ND
2-Methyl Naphthalene	03/19/96	3.40 ug/kg	ND	ND	ND
Naphthalene	03/19/96	1.70 ug/kg	401 ug/kg	5.17 ug/kg	60.9 ug/kg
Phenanthrene	03/19/96	6.70 ug/kg	1890 ug/kg	28.5 ug/kg	275 ug/kg
Pyrene	03/19/96	5.00 ug/kg	2400 ug/kg	ND	964 ug/kg

Remarks

RL ⇒ Reporting Limit
ND ⇒ Not Detected at or above RL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1481-96LS		
Sample Type	Soil		
Collected	03/11/96		
Received	03/11/96		
Reported	03/26/96		
Sample Description	SSB-13		

Analysis	Date Analyzed	RL			
Acenaphthene	03/19/96	5.70 ug/kg	ND		
Acenaphthylene	03/19/96	1.20 ug/kg	ND		
Anthracene	03/19/96	9.00 ug/kg	ND		
Benzo[a]anthracene	03/19/96	4.00 ug/kg	8.29 ug/kg		
Benzo[a]pyrene	03/19/96	4.00 ug/kg	16.3 ug/kg		
Benzo[b]fluoranthene	03/19/96	2.20 ug/kg	14.5 ug/kg		
Benzo[k]fluoranthene	03/19/96	1.70 ug/kg	6.96 ug/kg		
Benzo[g,h,i]perylene	03/19/96	4.50 ug/kg	4.29 ug/kg		
Chrysene	03/19/96	1.70 ug/kg	ND		
Dibenzo[a,h]anthracene	03/19/96	6.20 ug/kg	ND		
Fluoranthene	03/19/96	6.20 ug/kg	46.7 ug/kg		
Fluorene	03/19/96	3.40 ug/kg	ND		
Indeno[1,2,3-cd]pyrene	03/19/96	6.70 ug/kg	7.10 ug/kg		
1-Methyl Naphthalene	03/19/96	1.20 ug/kg	16.3 ug/kg		
2-Methyl Naphthalene	03/19/96	3.40 ug/kg	ND		
Naphthalene	03/19/96	1.70 ug/kg	9.50 ug/kg		
Phenanthrene	03/19/96	6.70 ug/kg	40.6 ug/kg		
Pyrene	03/19/96	5.00 ug/kg	ND		

Remarks

RL ⇒ Reporting Limit
ND ⇒ Not Detected at or above RL

SERIAL NUMBER
№ 13869

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client TPT Env. Dept. Report To Jon Hinkel

Address 728 Garfield Ave.

Duluth — Bill To 599-95E.RA

Phone — Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Remarks • Wisconsin Job
• Report PVOCs in ppb units

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: PVOC	Analyses: Lead	Analyses: PAH #8310	LSL No.
SSB-1	1/19/96	1:12 pm			✓			✓	✓	✓		1160
SSB-2	1/19/96	1:20 pm			✓			✓	✓	✓		1161
SSB-3	1/19/96	1:40 pm			✓			✓	✓	✓	✓	1162
SSB-4	1/19/96	2:05 pm			✓			✓	✓	✓		1163
SSB-5	1/19/96	2:15 pm			✓			✓	✓	✓		1164
SSB-6	1/19/96	2:45 pm			✓		4 RJH	✓	✓	✓	✓	1165
SSB-7	1/19/96	2:55 pm			✓			✓	✓	✓		1166
SSB-8	1/19/96	3:06 pm			✓			✓	✓	✓		1167
SSB-9	1/19/96	3:20 pm			✓			✓	✓	✓	✓	1168

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R J Hinkel	1/19/96 3:55 pm	[illegible] 1/19/96			

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

SERIAL NUMBER
№ 13871

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client TPT Env. Dept. Report To Jon Hinkel

Address 728 Garfield Ave. _____

Duluth – Bill To 599-95E.RA

Phone — Fax _____

Sampler Signature R. J Hinkel

Sampler (Print) R. J. Hinkel

Remarks • Resampling of 1/19/96 event
• Wisconsin site
• Report PVOCs in ppb (Low Level detection)

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: PVOC	Analyses: Lead	Analyses: PAH # 8310	LSL No.
SSB-4	1/22/96	2:33 pm			✓	3		✓	✓	✓		1176
SSB-5	1/22/96	3:10 pm			✓	3		✓	✓	✓		1177
SSB-6	1/22/96	3:25 pm			✓	4		✓	✓	✓	✓	1178
SSB-8	1/22/96	3:37 pm			✓	3		✓	✓	✓		1179
SSB-9	1/22/96	4:00 pm			✓	4		✓	✓	✓	✓	1180

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R.J. Hinkel 1/23/96	8:24am	[signature] 1/23/96			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Analysis	Date Analyzed	MDL	Chem. Lab ID	1160-96LS	1161-96LS	1162-96LS
			Sample Type	Soil	Soil	Soil
			Collected	01/19/96	01/19/96	01/19/96
			Received	01/19/96	01/19/96	01/19/96
			Reported	02/15/96	02/15/96	02/15/96
			Sample Description	SSB-1	SSB-2	SSB-3
Lead	01/26/96	5.00 mg/kg		14.6 mg/kg	ND	ND
MTBE	01/30/96	25 ug/kg		98 ug/kg	ND	ND
Benzene	01/30/96	5.0 ug/kg		27 ug/kg	ND	ND
Toluene	01/30/96	25 ug/kg		77 ug/kg	ND	ND
Ethylbenzene	01/30/96	25 ug/kg		ND	ND	ND
Xylenes, Total	01/30/96	75 ug/kg		ND	ND	ND
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg		ND	ND	ND
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg		ND	ND	ND
Moisture	01/30/96	1.00 %		23.2 %	17.6 %	19.1 %
Diesel Range Organics	02/01/96	0.100 mg/l		ND	ND	ND

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Analysis	Date Analyzed	MDL	Chem. Lab ID: 1176-96LS	1177-96LS	1178-96LS
			Sample Type: Soil	Soil	Soil
			Collected: 01/22/96	01/22/96	01/22/96
			Received: 01/23/96	01/23/96	01/23/96
			Reported: 02/15/96	02/15/96	02/15/96
			Sample Description: SSB-4	SSB-5	SSB-6
MTBE	01/30/96	25 ug/kg	ND	ND	ND
Benzene	01/30/96	5.0 ug/kg	57 ug/kg	50 ug/kg	50 ug/kg
Toluene	01/30/96	25 ug/kg	94 ug/kg	81 ug/kg	84 ug/kg
Ethylbenzene	01/30/96	25 ug/kg	50 ug/kg	52 ug/kg	53 ug/kg
Xylenes, Total	01/30/96	75 ug/kg	160 ug/kg	190 ug/kg	180 ug/kg
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg	36 ug/kg	47 ug/kg	43 ug/kg
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg	52 ug/kg	64 ug/kg	59 ug/kg
Lead	01/26/96	5.00 mg/kg	256 mg/kg	315 mg/kg	117 mg/kg
Moisture	01/30/96	1.00 %	20.9 %	35.0 %	29.9 %
Diesel Range Organics	02/02/96	5.00 mg/kg	61.5 mg/kg	29.2 mg/kg	22.3 mg/kg

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1166-96LS		
Sample Type	Soil		
Collected	01/19/96		
Received	01/19/96		
Reported	02/15/96		
Sample Description	SSB-7		

Analysis	Date Analyzed	MDL			
Lead	01/26/96	5.00 mg/kg	98.3 mg/kg		
MTBE	01/30/96	25 ug/kg	ND		
Benzene	01/30/96	5.0 ug/kg	ND		
Toluene	01/30/96	25 ug/kg	ND		
Ethylbenzene	01/30/96	25 ug/kg	ND		
Xylenes, Total	01/30/96	75 ug/kg	ND		
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg	ND		
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg	ND		
Moisture	01/30/96	1.00 %	28.9 %		
Diesel Range Organics	02/01/96	0.100 mg/l	ND		

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Analysis	Date Analyzed	MDL	Chem. Lab ID: 1179-96LS	Chem. Lab ID: 1180-96LS	
			Sample Type: Soil	Sample Type: Soil	
			Collected: 01/22/96 Received: 01/23/96 Reported: 02/15/96	Collected: 01/22/96 Received: 01/23/96 Reported: 02/15/96	
			Sample Description: SSB-8	Sample Description: SSB-9	
MTBE	01/30/96	25 ug/kg	ND	ND	
Benzene	01/30/96	5.0 ug/kg	ND	ND	
Toluene	01/30/96	25 ug/kg	49 ug/kg	60 ug/kg	
Ethylbenzene	01/30/96	25 ug/kg	44 ug/kg	58 ug/kg	
Xylenes, Total	01/30/96	75 ug/kg	140 ug/kg	180 ug/kg	
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg	39 ug/kg	53 ug/kg	
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg	51 ug/kg	61 ug/kg	
Lead	01/26/96	5.00 mg/kg	115 mg/kg	321 mg/kg	
Moisture	01/30/96	1.00 %	27.2 %	53.9 %	
Diesel Range Organics	02/02/96	5.00 mg/kg	ND α	71.1 mg/kg	

Remarks

MDL $\Rightarrow$ Method Detection Limit
ND $\Rightarrow$ Not Detected at or above MDL

$\alpha \Rightarrow$ Analyzed On 02/01/96

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1162-96LS		
Sample Type	Soil		
Collected	01/19/96		
Received	01/19/96		
Reported	02/15/96		
Sample Description	SSB-3		

Analysis	Date Analyzed	MDL			
Naphthalene	02/13/96	160 ug/kg	ND		
Acenaphthylene	02/13/96	240 ug/kg	ND		
Acenaphthene	02/13/96	80.0 ug/kg	ND		
Fluorene	02/13/96	80.0 ug/kg	ND		
Phenanthrene	02/13/96	12.0 ug/kg	18.6 ug/kg		
Anthracene	02/13/96	3.60 ug/kg	ND		
Fluoranthene	02/13/96	12.0 ug/kg	51.2 ug/kg		
Pyrene	02/13/96	20.0 ug/kg	60.5 ug/kg		
Benzo[a]anthracene	02/13/96	2.80 ug/kg	26.0 ug/kg		
Chrysene	02/13/96	2.80 ug/kg	36.3 ug/kg		
Benzo[b]fluoranthene	02/13/96	2.40 ug/kg	19.5 ug/kg		
Benzo[k]fluoranthene	02/13/96	2.40 ug/kg	11.6 ug/kg		
Benzo[a]pyrene	02/13/96	3.20 ug/kg	23.7 ug/kg		
Dibenzo[a,h]anthracene	02/13/96	20.0 ug/kg	<40.0 ug/kg		
Benzo[g,h,i]perylene	02/13/96	32.0 ug/kg	<64.0 ug/kg		
Indeno[1,2,3-cd]pyrene	02/13/96	8.00 ug/kg	<16.0 ug/kg		

Remarks

1162-96LS Elevated detection limit due to sample concentration.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	1178-96LS	1180-96LS	
			Sample Type	Soil	Soil	
			Collected	01/22/96	01/22/96	
			Received	01/23/96	01/23/96	
			Reported	02/15/96	02/15/96	
			Sample Description	SSB-6	SSB-9	
Analysis	Date Analyzed	MDL				
Naphthalene	02/14/96	160 ug/kg		ND	ND	
Acenaphthylene	02/14/96	240 ug/kg		ND	ND	
Acenaphthene	02/14/96	80.0 ug/kg		419 ug/kg	859 ug/kg	
Fluorene	02/14/96	80.0 ug/kg		ND	ND	
Phenanthrene	02/14/96	12.0 ug/kg		223 ug/kg	713 ug/kg	
Anthracene	02/14/96	3.60 ug/kg		32.4 ug/kg	80.7 ug/kg	
Fluoranthene	02/14/96	12.0 ug/kg		447 ug/kg	1120 ug/kg	
Pyrene	02/14/96	20.0 ug/kg		503 ug/kg	1290 ug/kg	
Benzo[a]anthracene	02/14/96	2.80 ug/kg		156 ug/kg	421 ug/kg	
Chrysene	02/14/96	2.80 ug/kg		235 ug/kg	618 ug/kg	
Benzo[b]fluoranthene	02/14/96	2.40 ug/kg		117 ug/kg	249 ug/kg	
Benzo[k]fluoranthene	02/14/96	2.40 ug/kg		61.4 ug/kg	146 ug/kg	
Benzo[a]pyrene	02/14/96	3.20 ug/kg		134 ug/kg	387 ug/kg	
Dibenzo[a,h]anthracene	02/14/96	20.0 ug/kg		<200 ug/kg	<400 ug/kg	
Benzo[g,h,i]perylene	02/14/96	32.0 ug/kg		<320 ug/kg	<640 ug/kg	
Indeno[1,2,3-cd]pyrene	02/14/96	8.00 ug/kg		<80.0 ug/kg	<160 ug/kg	

Remarks

WI DNR Laboratory Certification #999446800

1178-96LS Elevated detection limit due to sample concentration.

1180-96LS Elevated detection limit due to sample concentration.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

SERIAL NUMBER
№ 13866

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. P.O.#

Client TPT Env. Dept Report To Jon Hinkel

Address 728 Garfield Ave

Duluth — Bill To 599-95E.RA

Phone — Fax

Sampler Signature RJ Hinkel

Sampler (Print) R. J. Hinkel

Remarks Please report in detection limits as follows:
100 ppm — GRO; DRO
3 ppm - BTEX parameters
1 ppm - lead

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: GRO	Analyses: DRO	Analyses: BTEX	Analyses: Lead	LSL No.
WS-1	1/17/96	4:35 pm		✓		5		✓	✓	✓	✓	1169

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
RJ Hinkel	1/19/96 9:25am	[signature] 1/19/96			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ____ 2-5 Day ✓ or 24 Hour Rush ____ (additional charge)

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

		Chem. Lab ID	1169-96LS		
		Sample Type	Water		
		Collected	01/17/96		
		Received	01/19/96		
		Reported	01/30/96		
		Sample Description	WS-1		
Analysis	**Date Analyzed**	**MDL**			
Diesel Range Organics	01/24/96	0.100 mg/l	0.492 mg/l		
Gasoline Range Organics	01/30/96	0.100 mg/l	ND		
Benzene	01/30/96	0.005 mg/l	ND		
Toluene	01/30/96	0.005 mg/l	ND		
Ethylbenzene	01/30/96	0.005 mg/l	ND		
Xylenes, Total	01/30/96	0.015 mg/l	ND		
Lead	01/20/96	0.400 mg/l	ND		

Remarks

DRO: Duplicate diesel component spike recovery = 119.3%. Method blank recovery = 0.135mg/l.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LAKE SUPERIOR LABORATORIES

SERIAL NUMBER
№ 14018

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client Twin Ports Testing Report To Jon Hinkel

Address _____

Bill To 599-95E, RA

Phone _____ Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R J Hinkel

Remarks
Wisconsin Job; low level detection required.
Note: VOC vial marked "X" experienced spillage in the field.

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: VOC	Analyses: PAH (8310)	Analyses: Lead	LSL No.
WS-2	5/30/96	3:45 pm		✓		6		✓	✓	✓	✓	2167
Field Blank	5/30/96	3:45 pm		✓		3			✓			2162
Trip Blank	—	—		✓		1			✓			2163

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R. J. Hinkel	5-31-96 8:15	[illegible] 5/31/96			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
WS-2

Chem. Lab ID: 2161-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Water
Collected: 05/30/96
Received: 05/31/96
Analyzed: 06/06/96
Reported: 06/24/96

Analysis EPA 8021

Dichlorodifluoromethane	<1.0	ug/l	1.1.2.2-Tetrachloroethane	<1.0	ug/l
Chloromethane	<1.0	ug/l	1.2.3-Trichloropropane	<1.0	ug/l
Vinyl Chloride	<1.0	ug/l	n-Propylbenzene	<1.0	ug/l
Bromomethane	<1.0	ug/l	Bromobenzene	<1.0	ug/l
Chloroethane	<1.0	ug/l	1.3.5-Trimethylbenzene	<1.0	ug/l
Trichlorofluoromethane	<1.0	ug/l	2-Chlorotoluene	<1.0	ug/l
1,1-Dichloroethene	<1.0	ug/l	4-Chlorotoluene	<1.0	ug/l
Methylene Chloride	<1.0	ug/l	tert-Butylbenzene	<1.0	ug/l
trans-1.2-Dichloroethene	<1.0	ug/l	1.2.4-Trimethylbenzene	<1.0	ug/l
1.1-Dichloroethane	<1.0	ug/l	sec-Butylbenzene	<1.0	ug/l
2.2-Dichloropropane	<1.0	ug/l	p-Isopropyltoluene	<1.0	ug/l
cis-1.2-Dichloroethene	<1.0	ug/l	1.3-Dichlorobenzene	<1.0	ug/l
Chloroform	<1.0	ug/l	1.4-Dichlorobenzene	<1.0	ug/l
Bromochloromethane	<1.0	ug/l	n-Butylbenzene	1.4	ug/l
1,1.1-Trichloroethane	<1.0	ug/l	1.2-Dichlorobenzene	<1.0	ug/l
1.1-Dichloropropene	<1.0	ug/l	1.2-Dibromo-3-chloropropane	<1.0	ug/l
Carbon Tetrachloride	<1.0	ug/l	1.2.4-Trichlorobenzene	<1.0	ug/l
Benzene	<1.0	ug/l	Hexachlorobutadiene	<1.0	ug/l
1.2-Dichloroethane	<1.0	ug/l	Naphthalene	3.0	ug/l
Trichloroethene	<1.0	ug/l	1.2.3-Trichlorobenzene	<1.0	ug/l
1.2-Dichloropropane	<1.0	ug/l	Diesel Range Organics	113	ug/l
Bromodichloromethane	<1.0	ug/l	Lead	11.1	ug/l
Dibromomethane	<1.0	ug/l			
Toluene	<1.0	ug/l			
1,1.2-Trichloroethane	<1.0	ug/l			
1,3-Dichloropropane	<1.0	ug/l			
Tetrachloroethene	<1.0	ug/l			
Dibromochloromethane	<1.0	ug/l			
1,2-Dibromoethane	<1.0	ug/l			
Chlorobenzene	<1.0	ug/l			
Ethylbenzene	<1.0	ug/l			
1.1.1.2-Tetrachloroethane	<1.0	ug/l			
m- & p-Xylene	<2.0	ug/l			
o-Xylene	<1.0	ug/l			
Styrene	<1.0	ug/l			
Isopropylbenzene	<1.0	ug/l			
Bromoform	<1.0	ug/l			

Remarks

DRO: date analyzed 06/13/96.

Lead: date analyzed 06/24/96. Method blank contained 7.56ug/l Pb. Spike recovery = 120.7%.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	2161-96LS		
Sample Type	Water		
Collected	05/30/96		
Received	05/31/96		
Reported	06/24/96		
Sample Description	WS-2		

Analysis	Date Analyzed	RL			
Acenaphthene	06/06/96	0.20 ug/l	ND		
Acenaphthylene	06/06/96	0.040 ug/l	ND		
Anthracene	06/06/96	0.32 ug/l	ND		
Benzo(a)anthracene	06/06/96	0.14 ug/l	ND		
Benzo(a)pyrene	06/06/96	0.14 ug/l	ND		
Benzo(b)fluoranthene	06/06/96	0.080 ug/l	ND		
Benzo(k)fluoranthene	06/06/96	0.060 ug/l	ND		
Benzo(g,h.i)perylene	06/06/96	0.16 ug/l	ND		
Chrysene	06/06/96	0.060 ug/l	ND		
Dibenzo(a.h)anthracene	06/06/96	0.22 ug/l	ND		
Fluoranthene	06/06/96	0.22 ug/l	ND		
Fluorene	06/06/96	0.12 ug/l	ND		
Indeno(1,2,3.c,d)pyrene	06/06/96	0.24 ug/l	ND		
1-Methyl Naphthalene	06/06/96	0.040 ug/l	ND		
2-Methyl Naphthalene	06/06/96	0.12 ug/l	ND		
Naphthalene	06/06/96	0.060 ug/l	ND		
Phenanthrene	06/06/96	0.24 ug/l	ND		
Pyrene	06/06/96	0.18 ug/l	ND		

Remarks

RL ⇒ Reporting Limit
ND ⇒ Not Detected at or above RL

ATTACH EMISSIONS CALCULATIONS

(a/1,000,000) x (2,800 lbs/yd³) x b = benzene emission in lbs., where a = benzene concentration of soil sample in ppm or mg/kg dry weight basis, and b = amount of contaminated soil in yds³. NOTE: This calculation can also be used to estimate TPH emissions by substituting TPH concentration (ppm or mg/kg) for "a". It may also be used to calculate VOCs.

Part II: Proposed Treatment Facility

Name of Plant: Lakehead Blacktop & Mtls.

Plant number and Model: Madson 4000 lb. Batch plant

Contact: Mr. Joe Kimmes

DNR Facility I.D. No.: 816037640

Address: 6327 Tower Ave.
(or location of portable plant) Superior, WI 54880

Distance to Nearest Residence/Business: 5000 ft.

LEAVE BLANK - DEPARTMENT OF NATURAL RESOURCES USE ONLY

Application Concurrence:

Air Management: Phyllis Holmbeck Date: 9/22/95

Project Manager: _____ Date: _____

Comments:

THIS SECTION TO BE COMPLETED BY THE ASPHALT/THERMAL UNIT PROCESSING THE CONTAMINATED SOIL
AFTER PROCESSING IS COMPLETED

Part III

WDNR Air Pollution Control Permit Number: _____

Actual Volume of Soil Treated (tons/cubic yards): 16 yds

Date of transport to plant: September 26, 1995

Date of treatment: October 5, 1995

Transporter Name: Earth Movers of Duluth

Transporter License Number: N/A

Circle One: (Roasted and Incorporated) Roasted Only

Total Benzene emissions in pounds for this batch (apply 50% destruction factor if no after burner is used): 99% Factor w/afterburner 0.0001 Lbs

Benzene emissions to date for this plant (including this batch) for this calendar year: 2.4482 Lbs

Signature of Treatment plant representative: Richard E. Hittner

Telephone Number at Plant: 715-394-1989

POST BURN SAMPLE RESULTS: COMPLETE ONLY FOR SOILS NOT INCORPORATED!

(One representative sample for each 100 cubic yards-not composites)

Sample Number _____ _____ _____ _____

TPH _____ _____ _____ _____

DNR APPROVAL IS REQUIRED BEFORE USING AS COMMON FILL

Date of backfilling or use as common fill _____ Location of fill site ____1/4____1/4____S____T____R

TOTAL BENZENE CALCULATION:

$$\left(\frac{< 0.2 \text{ mg/kg}}{1{,}000{,}000}\right) \times \left(\frac{2{,}800 \text{ lbs.}}{1 \text{ cu yrd}}\right) \times \left(18 \text{ cu yrds}\right) = < 0.010 \text{ lbs. benzene}$$

$$\frac{0.2}{1{,}000{,}000} \times 2800 \times 16 \text{ yds} = 0.0090 \text{ Lbs}$$

99% Factor w/afterburner = 0.0001 Lbs

Det. level

TOTAL PETROLEUM HYDROCARBONS CALCULATION:

$$\left(\frac{10{,}300 \text{ mg/kg}}{1{,}000{,}000}\right) \times \left(\frac{2{,}800 \text{ lbs.}}{1 \text{ cu yrd}}\right) \times \left(18 \text{ cu yrds}\right) = 519 \text{ lbs. TPH}$$

Feed rate Calc.

@ 98% dist.

$$x \text{ tons/hr} = \frac{(9 \text{ lb/hr}) * (1.4 \text{ ton/yd}^3) * 18 \text{ yd}^3}{519 \text{ lb DRO} * (1 - 0.98)}$$

$$= 21.85 \text{ yd}^3/\text{hr.}$$

original delivered to Phyllis Holmbeck by RJH 1/4/95 4:30 pm

State of Wisconsin
Department of Natural Resources

NOTIFICATION TO TREAT OR DISPOSE OF PETROLEUM CONTAMINATED SOIL & WATER

Form 4400-120
Rev. 9-95

This form is required by the Department of Natural Resources (DNR) to ensure that the remediation of petroleum contaminated soil and water is in compliance with NR 500-540, NR 158, NR 419 and NR 445, Wis. Adm. Code. Failure to comply with applicable statutes and administrative rules may lead to violations of subchapters III and IV of Ch. 144, Wis. Stats. and may result in forfeitures of not less than $10 or more than $25,000 for each violation, pursuant to ss. 144.426(1), 144.74(1), 144.99, Wis. Stats., or fines of not less than $100 or more than $150,000 or imprisonment for not more than 10 years, or both, pursuant to s. 144.74(2), Wis. Stats. Each day of a continuing violation constitutes a separate violation. **Except for the remediation of virgin petroleum spills, this form needs to be submitted to the DNR 10 business days prior to the commencement of the remediation.**

DIRECTIONS: 1) Complete both sides of the form. 2) Have the responsible party sign the form. **This signature certifies that the information on this form and in all supporting documents is accurate.** 3) Submit the form with supporting documentation, lab reports and any maps to the appropriate District Air Management Program at least 10 business days prior to the commencement of remediation. 4) Submit a copy of this form to the DNR project manager and retain a copy for your records.

PART I - GENERAL INFORMATION

Site Name & Address: Hughitt Slip Property Superior, Wisconsin (no street address - see attached maps)	Date of Form Completion: January 4, 1996
Site #: Excavation #3 area (see Figure 3, attached)	Do Other Remediation Systems Exist at This Site? ☐ YES ☑ NO
County: Douglas	Site Type: ☐ LUST ☐ ERP ☐ CERCLA ☐ Other, Explain: spill site - apparently waste oil
Responsible Party Name & Address: Norman & Donna Camenker 70 Highgate Court Superior, Wisconsin 54880	Responsible Party Signature: Donna Camenker Telephone #: (715) 392-5457 (WI) (602) 855-4825 (Ariz.)
Consulting Firm Name & Address: Twin Ports Testing, Inc. 728 Garfield Avenue Duluth, Minnesota 55802	Consulting Firm Contact: Jon Hinkel, geologist Telephone #: (218) 722-1911

PART II - SOIL AND WATER DATA (Attach Lab Reports and Calculations) *

Type of Contamination: ☐ Gasoline ☐ Diesel ☐ Fuel Oil ☑ Waste Oil
☐ Chlorinated Organics ☐ Other: _____

Soil Concentration:

GRO: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

DRO: 2370 lb — 4240 mg/kg/10^6 x 2,800 lb/yd^3 x 200 yd^3 = 2370

Benzene: <.025 mg/kg/10^6 x 2,800 lb/yd^3 x 200 yd^3 = <0.014 lb

Chlorinated Organics: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

Other: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

Water Concentration: GRO: _____ mg/L DRO: _____ mg/L Benzene: _____ mg/L

Chlorinated Organics: _____ mg/L Other: _____ mg/L

PART III - TREATMENT OR DISPOSAL FACILITY INFORMATION

Treatment/Disposal Facility Name & Address: Jackson County Landfill, Inc. Route 3 Box 953 Black River Falls, WI 54615	Facility ID: 02004
	Air Pollution Control Permit #: Not necessary
Facility Contact: Alina Limberg Telephone #: (715) 284-2262	Facility Located in 10-county Area in Southeast Wisconsin: No Distance to Nearest Residence or Business: 1½ miles
Headquarter Address: Same as above.	Portable Sources Only: Has a Portable Source Relocation Notification (Form 4500-25) Been Submitted for this Location: ☐ YES ☐ NO N/A

* Please note: the concentrations provided for DRO and Benzene are maximum readings; the bulk of our sample analyses results are o much lower concentrations.

PART III - SOIL VACUUM EXTRACTION OR GROUNDWATER REMEDIATION

Site Contact & Telephone #:	Proposed Operations (Attach Calculations) Anticipated Start-Up Date:
Is Site Located in the 10-county Area in	Estimated Project Duration:
Distance to Nearest	# of Wells:
Pilot Test/Soil Venting Only (Attach Lab Reports and Calculations) Date of Test: Flow Rate (scfm): - Not Applicable - Total Withdrawal of Air (scf): Total VOC Emission Rate (lb/hr): Benzene Emission Rate (lb/hr):	# of Emission Points: Stack Height: - Not Applicable - Maximum Equipment Flow Rate (scfm or gpm): Total VOC Emission Rate (lb/hr): Benzene Emission Rate (lb/hr): Benzene Emission Rate (lb/yr):

PART III - OTHER REMEDIATION METHODS

Proposing Other Remediation Method: ☐ YES Method Name: _____

Attach a project description for other remediation methods including landspreading, passive aeration and bioremediation. At a minimum, the information submitted should include the following items (with any supporting lab reports and calculations):

✓ Address/Location of Remediation Site - Indicate if this location is in the 10-county area in Southeast Wisconsin and the distance to the nearest residence or business. Include a map or site plan if appropriate.

✓ Description of Remediation Method

✓ Project Contact & Telephone #

✓ Anticipated Start-Up and Estimated Project Duration - Not Applicable -

✓ Highest Estimated Hourly VOC Emissions

✓ Highest Estimated Hourly and Annual Benzene Emissions

✓ Emission Testing Methodology

✓ Final Destination of Soil

TRANSMITTAL

SINCE 1972
TWIN PORTS TESTING, inc.
1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
FAX # (715) 392-7163 • (715) 392-7114

To: Chris Saari
Wisconsin DNR
Brule WI office

Date: July 24th 1996
Job #: 599-95E.RA
Client: Norman & Dona Camenker
Project: Hughitt Slip Site.

We are sending you:

✓ Enclosed	Airmail	Shop Drawings
Separate Cover	1st Class	Other Drawings
✓ By our Messenger	Other	Specifications
By your Messenger		Other

# OF COPIES	REPORT/PROPOSAL ID	LATEST DATE	DESCRIPTION OR REMARKS
(1)	RI/RA Report		
(4)	Case Summary & Close-out form		

THESE ARE TRANSMITTED as checked below:

For approval ☑	As requested ☑	No Exception Taken ☐	Revise & resubmit ☐
For your use ☑	For review & comment ☐	Make corrections noted ☐	Submit specified item ☐

Remarks: Dear Chris,
If you have any questions, please call me.

Thank you

COPIES TO:	Encl.	Trans.
Norman & Dona Camenker		

Sincerely,

Jon Hinkel
(218) 722-1911

REMEDIAL INVESTIGATION AND REMEDIAL ACTION PROJECT
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN
JULY, 1996 TPT #599-95E.RA

Norman and Dona Camanker
70 Highgate Road
Superior, WI 54880

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FIGURES

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APPENDICES

REMEDIAL INVESTIGATION AND REMEDIAL ACTION PROJECT
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

I. INTRODUCTION

A project of remedial investigation and remedial action was conducted by Twin Ports Testing, Inc. (TPT) from September, 1995 to May, 1996, on the Hughitt Slip property, located adjacent to and east of the Hughitt Slip in Superior, Wisconsin. The project followed from recommendations provided in a Phase I Environmental Property Assessment (TPT #539-95E.PI) conducted in August, 1995, and has involved the removal and disposal of approximately 146 cubic yards of petroleum contaminated soil from three apparent spill sites. The property is owned by Mr. Norman and Mrs. Dona Camenker of Superior, Wisconsin, who have assumed the responsibility for the property's investigation and clean-up.

II. BACKGROUND

PROPERTY LOCATION / SITE DESCRIPTION

The Hughitt Slip property is located in the NE¼ of the SE¼ of Section 10, Township 49N, Range 14W, of Douglas County, and is displayed on the Superior, Wisconsin USGS 7½' Quadrangle (Figure 1). The property lies approximately 400 feet north of N. 1st Street, and may be accessed from a gravel road extending northward from N. 1st Street (Figure 2). The three sites of investigation and remedial action are located adjacent to and west of a concrete pad on the southern portion of the property (referred to as Site 1 in this report); approximately 36 feet north of the concrete pad (Site 2); and adjacent to and west of a vehicle turn-around area on the northern portion of the property (Site 3).

LOCAL / REGIONAL GEOLOGY

The three apparent petroleum release sites have been found to be underlain by various fill materials near the surface including coarse to fine grained sands, gravel, slag, coal, and ash-like material. Various underground structural members including railroad ties, large timbers, pilings and steel rods have been encountered in several locations. Native soils underlying the fill materials are believed to be lacustrine clays, reaching thicknesses of approximately 500 feet in the vicinity of the subject property. Groundwater appears to lie 1½ to 2½ feet beneath the surface of the subject property with movement anticipated to be directed northward and westward from the sites; groundwater movement may vary in direction depending upon local geology as well as water level fluctuations in St. Louis Bay and the adjacent Hughitt Slip.

PREVIOUS INVESTIGATIONS

TPT conducted a Phase I Environmental Property Assessment on the Hughitt Slip property in August, 1995 (TPT #539-95E.PI) for the RamsHorn Development Corporation. During an inspection of the property grounds, three sites of ground staining were identified. These sites included an area measuring approximately 3x4 feet located adjacent to and west of a concrete pad on the property's southern portion (Site 1); an area measuring approximately 3x3 feet located approximately 36 feet north of the concrete pad (Site 2); and an area containing several areas of ground staining located adjacent to and west of a vehicle turning area on the northern portion of the property (Site 3).

The Phase I assessment was followed by a Phase II investigation (TPT #552-95E.MM) of the three sites of ground staining. During the Phase II investigation, soil samples were collected from each of the three sites, and field screened for petroleum related organic vapors. Duplicate soil samples were analyzed for diesel range organics (DRO, petroleum volatile organic compounds (PVOCs), lead, cadmium, and chromium; and polychlorinated biphenyls (PCBs). Results of the field screening revealed organic vapor concentrations reading from 0.0 to 51 parts per million (ppm) throughout the sample suite. Results of the laboratory analyses revealed moderate to high concentrations of DRO (45.1 - 10,300 ppm); various minor detections of several specific petroleum-related compounds; minor to moderate concentrations of chromium (9.05 - 65.1 ppm); and moderate to moderately high concentrations of lead (46.5 - 222 ppm) at the sites. No cadmium or PCB contaminants were detected within the sample suite. In consideration of the high concentration of lead revealed from one of the sampling locations (Site 1), an additional soil sample was collected from the site of concern and analyzed for lead using toxicity characteristics leaching procedure (TCLP). Results of the TCLP analysis revealed no leachable lead detected in the soil sample (Table 1: Phase II Soil Analysis Results).

III. FIELD INVESTIGATION AND REMEDIAL ACTION

SURVEY OF POTENTIAL RECEPTORS

In an effort to identify potential receptors of any contamination associated with the three apparent spill sites located on the Hughitt Slip property, a well records search was requested from the Wisconsin Geological and Natural History Survey (WGNHS). Results of the WGNHS records search revealed no groundwater supply wells recorded within ¼ mile of the Hughitt Slip property (Appendix A: WGNHS Records Search Documentation). Field observation of the Hughitt Slip property and neighboring properties made by TPT during the project's investigation and cleanup operations revealed no well casing or other evidence of groundwater supply wells in the area.

METHODS / PRELIMINARY RESULTS

Following the confirmation of petroleum contamination at the three sites of surface staining, various investigation and remediation strategies were considered. In view of the very limited extents of surface stains observed, and the potential for accomplishing an effective cleanup of the sites involving a minimum of expense, an attempt was made to over-excavate contaminated soils in the areas of staining, for local disposal. With Wisconsin Department of Natural Resources (DNR) approval (TPT communication with Mr. Steve LaValley, acting DNR project manager, DNR Superior office, 9/7/95) TPT directed the excavation of approximately 16 cubic yards of contaminated and potentially contaminated soil from the three sites on September 26, 1995. The northernmost site (Site #3) was excavated in three adjacent but separate locations, corresponding to apparent surface stains observed (Figure 3: Initial Site Excavations). The excavations were advanced to depths of 1½ to 2 feet, and were guided by a TPT environmental technician. Soil samples were collected from each excavation and field screened for petroleum related organic vapors using a portable photoionization detector (PID: OVM Model 580 B, equipped with a 10.6 eV lamp) according to standard jar-headspace procedure. Duplicate soil samples were selected from the bases of the excavations and submitted to the laboratory for analysis for DRO, PVOCs and lead. No groundwater was encountered in any of the excavations. The contaminated soil was transported to Lakehead Blacktop and Materials of Superior for thermal treatment (DNR Soil Treatment Authorization, Appendix B).

Results of the field screening indicated low to moderate concentrations of organic vapors (0.0 to 71.7 ppm) for soils remaining at Sites 1,2,3b and 3c, with some elevated concentrations (127 - 155 ppm) in soils remaining at the 3a excavation (Table 2). Analysis results of the laboratory samples revealed nondetectable to low concentrations of DRO at Sites 1,2,3b and 3c, with elevated DRO concentrations (4240 ppm) at Site 3a; a low concentration of benzene at Site 3a; (0.019 ppm) and elevated lead concentrations (160 - 254 ppm) at sites 3a, 3b and 3c (Table 3).

METHODS / FINAL RESULTS

Following the receipt of the laboratory results associated with soils left in place from the initial excavations, the DNR requested additional remedial work be conducted at Site 3 (DNR correspondence, 12/8/95, Appendix C). In consideration of the contaminant concentrations involved, and the potential for associated groundwater contamination to have occurred at Site 3, a work plan was proposed to enlarge the Site 3 excavations to extend below the water table (TPT Proposal 95P-183E, Appendix D). Following DNR approval of the work plan (DNR correspondence 12/18/95, Appendix E), approximately 130 additional cubic yards of contaminated soil was removed from Site 3 on January 17, 1996. The initial 3a and 3b excavations were enlarged on all sides to form a single excavation, extending 2½ to 4 feet deep; the 3c initial excavation was enlarged on all sides and extended to approximately 3 feet deep (Figure 4). During the excavation enlargements, numerous treated timbers and pilings were encountered beneath the

surface. The excavations were guided by a TPT Environmental Technician using a portable PID as before. The excavations were halted when all field screening readings of excavation boundary soil samples registered below 1.0 ppm (Table 4: Field Screening Results, Final Excavations) Duplicate soil samples were selected from the excavations' walls at the water table and submitted to the laboratory for analysis for DRO, volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs) and lead. Due to the excavations having been extended below the water table, groundwater entered the excavations within a short period of time. One water sample (WS-1) was collected from the incoming water and submitted to the laboratory for analysis for gasoline range organics (GRO); DRO; benzene, toluene, ethylbenzene, and xylenes (BTEX); and lead. The contaminated soil was transported to the Jackson County Landfill for disposal (Appendix F: DNR Soil Disposal Authorization Permit).

Prior to backfilling, an attempt was made to remove all waste water which had accumulated within the excavations. The total removal of the waste water was found to be impracticable however, as the water removed was replenished almost immediately by incoming groundwater from the surrounding soils. Approximately 2,000 gallons of waste water was successfully removed and disposed of with the Western Lake Superior Sanitary District (WLSSD; Acceptance Documentation, Appendix G). The excavations were backfilled using uncontaminated sand fill imported from an off-site source. A temporary groundwater monitoring well screen and riser assembly was installed in the area of the former Site 3a excavation during the backfilling.

Results of the laboratory analyses of the soil samples collected from the final excavation boundaries indicated nondetectable to slight concentrations of DRO (0.0 - 71.1 ppm) and benzene (0.0 - 0.057 ppm), non-detectable to elevated concentrations of lead (0.0 - 321 ppm), and very low concentrations of various other VOC and PAH parameters (Table 5). Results of the laboratory analyses of the groundwater sample collected prior to the backfilling at the final excavation indicated a very slight presence of DRO (492 parts per billion or ppb) no detectable VOCs, and no detectable lead.

Following a communication update from TPT, the DNR requested additional soil samples be collected from the areas surrounding the former excavation sites, and an additional groundwater sample be collected (DNR correspondence, 2/23/96, Appendix H). On March 11, 1996, TPT placed a series of three hand auger borings (SSB-10,11 and 12) to surround the former excavation sites (Figure 4). A fourth hand auger boring (SSB-13) was placed approximately 70 feet south of the former excavation area to serve as a control or indicator of possible PAH background concentrations (Appendix I: Hand Auger Boring Logs/Boring Abandonment Forms). The borings were extended 2½ to 3 feet deep each with soil samples collected at the level of the water table. The soil samples were transported to the laboratory for analysis for VOCs, PAH compounds and lead. Each hand auger boring was abandoned using bentonite.

A second groundwater sample was collected on May 30, 1996, from the temporary groundwater monitoring well emplaced by TPT during the excavation backfilling, and analyzed for DRO, VOCs, PAHs and lead. Results of the hand auger boring soil sample

analyses indicated non-detectable to extremely low concentrations of various VOC parameters, non-detectable to moderately elevated concentrations of lead (0.0 - 216 ppm) and non-detectable to low concentrations of various PAH parameters (Table 5). No detectable concentrations of benzene were encountered surrounding the excavation area. Analysis of the hand auger boring soil sample collected approximately 70 feet south of the excavation area indicated a presence of PAH compounds similar to that indicated for the other hand auger samples, and the final excavation boundary soil samples.

Results of the second groundwater sample analysis indicated a reduced concentration of DRO (113 ppb) as compared to the first groundwater sample analysis, and very slight concentrations of n-butylbenzene (1.4 ppb), naphthalene (3.0 ppb) and lead (11.1 ppb; Table 6).

IV. DISCUSSION AND CONCLUSIONS

It appears from observations made during the project's field work, as well as the project's accumulated laboratory results, that the bulk of the petroleum related contamination has been effectively removed from the Hughitt Slip property excavation sites. Soil contamination indicated to remain at sites 1 and 2 includes 5.1 ppm DRO at Site 1, and no detectable PVOCs, no detectable lead, and no evidence of a likelihood of groundwater contamination at either site.

Site 3 soils appear to retain minor traces of VOC contaminants, confined to the area bounded by hand auger boring locations SSB-10, 11 and 12 and the Hughitt Slip. With the exception of benzene indicated in concentrations reaching 0.057 ppm, no concentrations of VOC parameters present in the site's soils exceed currently established DNR enforcement standards.

The presence of very low concentrations of various PAH parameters appears to exist throughout the Site 3 area soils and beyond, as evidenced from the area's soil analyses results and the analysis results from the soil sample (SSB-13) collected 70 feet south of the Site 3 excavation area. It appears likely that the PAH parameters observed through the soil analyses are related to the original coatings of the timber pilings encountered during the site's excavation. As such pilings appear to be present throughout the pier's construction, it seems reasonable to assume that such PAH concentrations represent a background chemistry likely to be present throughout the subject property, adjacent properties, and elsewhere along the city's waterfront areas, and do not represent contamination associated with any prior releases on the subject property.

The presence of elevated concentrations of lead in the Site 3 area soils appear distributed between the former Site 3 excavations' eastern boundaries and the Hughitt Slip. The highest concentrations of lead in the site's soils (above 300 ppm) appear within the immediate vicinity's of the former excavations, generally diminishing in both the southern and northern directions.

Groundwater in the vicinity of Site 3 appears to have experienced little impact associated with the contaminants identified in the site's soils. Over the course of the two groundwater sampling events, a very slight and diminishing presence of DRO, two trace concentrations of VOC parameters and a trace concentration of lead have been identified; no PAH constituents have been detected. No VOC, or lead concentrations have been observed in exceedence of currently established DNR groundwater enforcement standards.

TPT believes that reasonable efforts have been applied to restore the subject property's sites of environmental concern to a state of former environmental integrity. The sources of contamination have been removed and groundwater impacts sustained in the area of the Site 3 excavation register below currently established enforcement standards. In consideration of these aspects, and the lack of threat to human health or the environment, remediation of the Hughitt Slip property sites is considered complete by TPT.

V. RECOMMENDATIONS

TPT recommends no further remedial investigation or remedial action associated with the former sites of contamination identified on the Hughitt Slip property.

TPT recommends that the Wisconsin DNR consider the Hughitt Slip property sites for case closure.

TPT recommends that the temporary groundwater monitoring well present at Site 3 be removed and formally abandoned, following DNR authorization and site closure.

VI. LIMITS OF INVESTIGATION AND REPORT

We have based the analysis and recommendations submitted in this report in part on the data obtained from monitoring wells, soil borings, excavation activities, and chemical analyses of samples obtained therefrom. The exact nature and extent of geologic variations and levels of contamination around the site may not be evident.

Conclusions and recommendations contained herein are based upon the applicable standards of our profession at the time this report was prepared.

This report was completed July 18, 1996 by **Twin Ports Testing, Inc.**

Jon Hinkel, Geologist

Brian E. McVean, P.E.
Environmental Department Manager

FIGURES

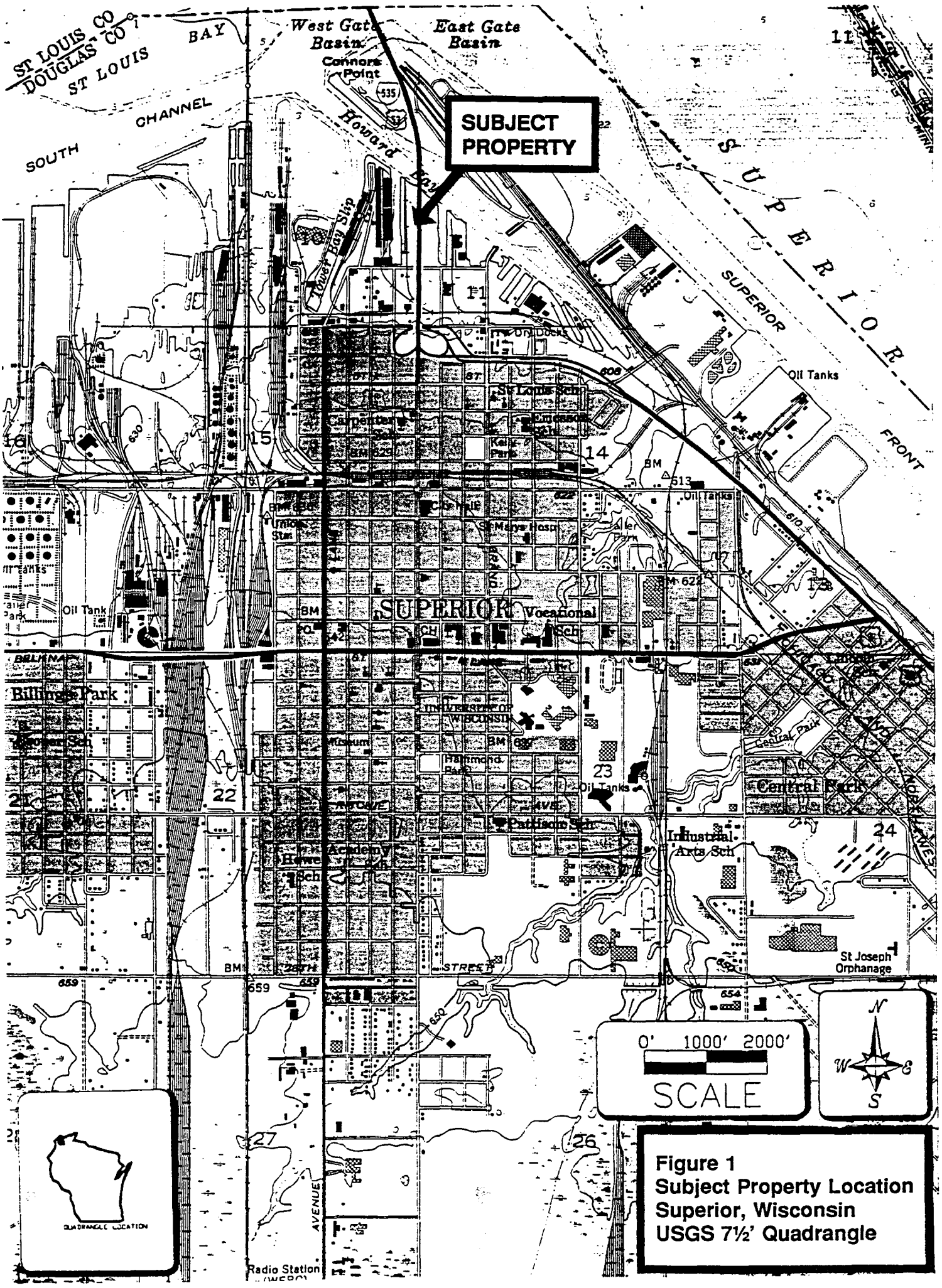


Figure 1
Subject Property Location
Superior, Wisconsin
USGS 7½' Quadrangle

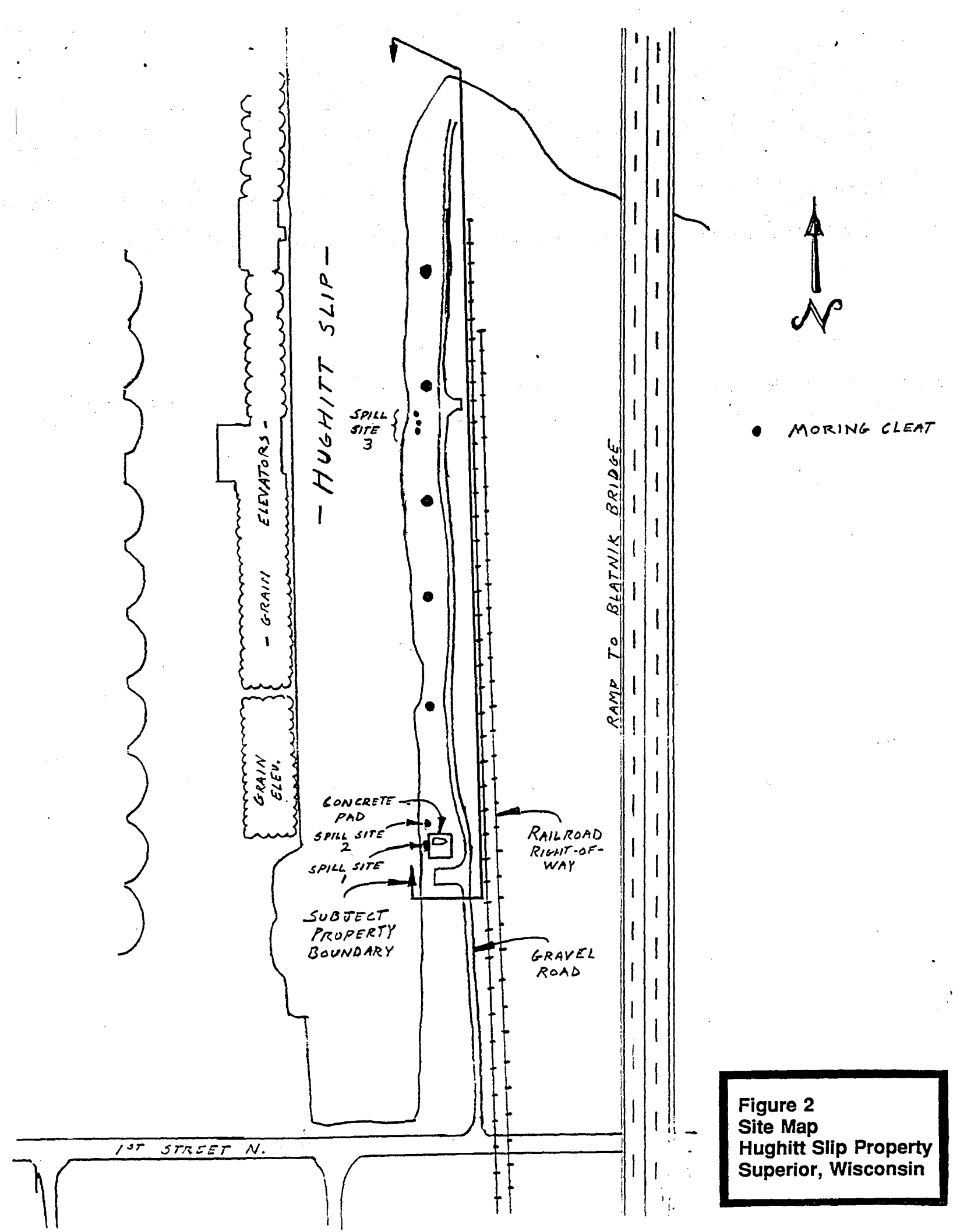


Figure 2
Site Map
Hughitt Slip Property
Superior, Wisconsin

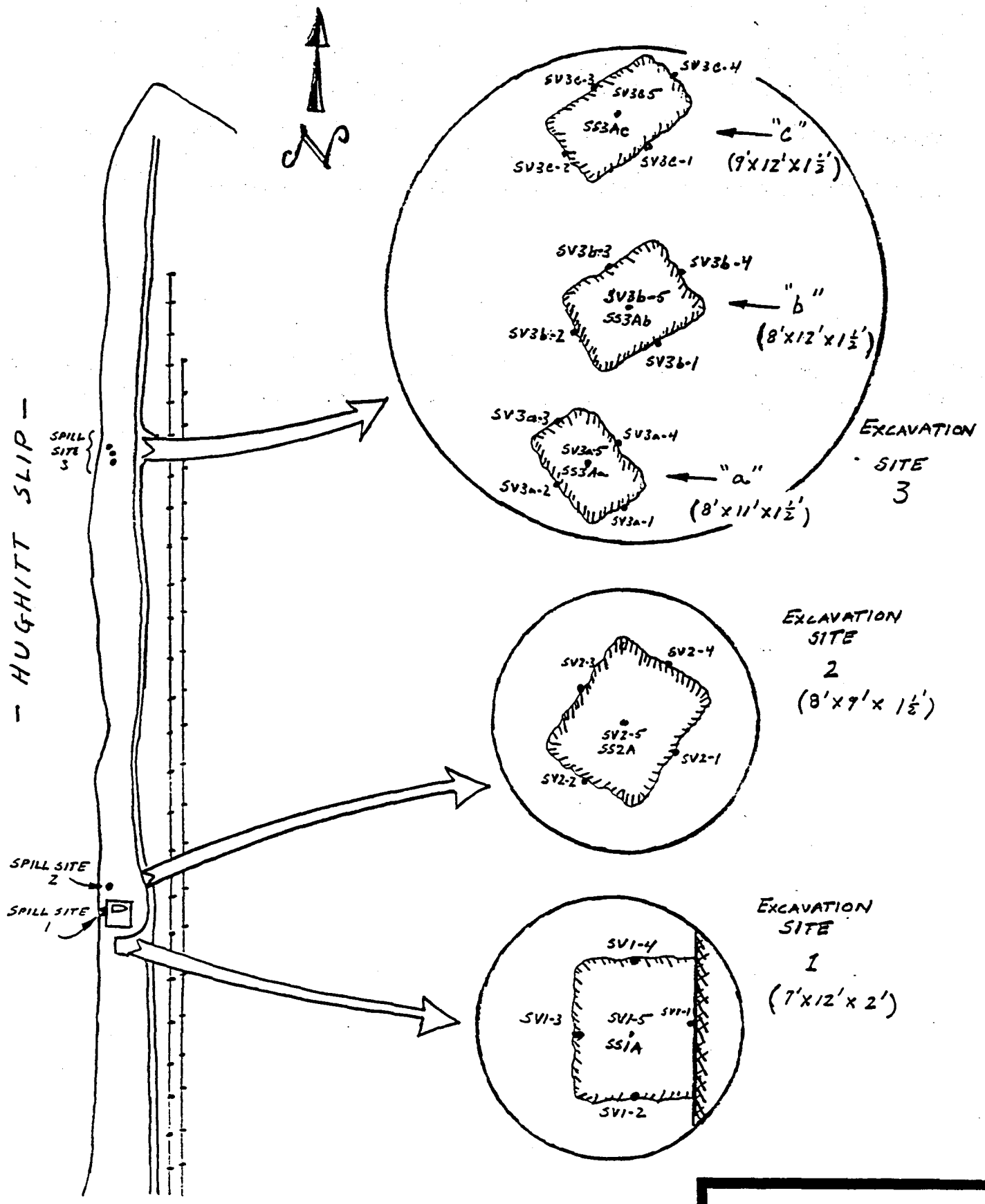
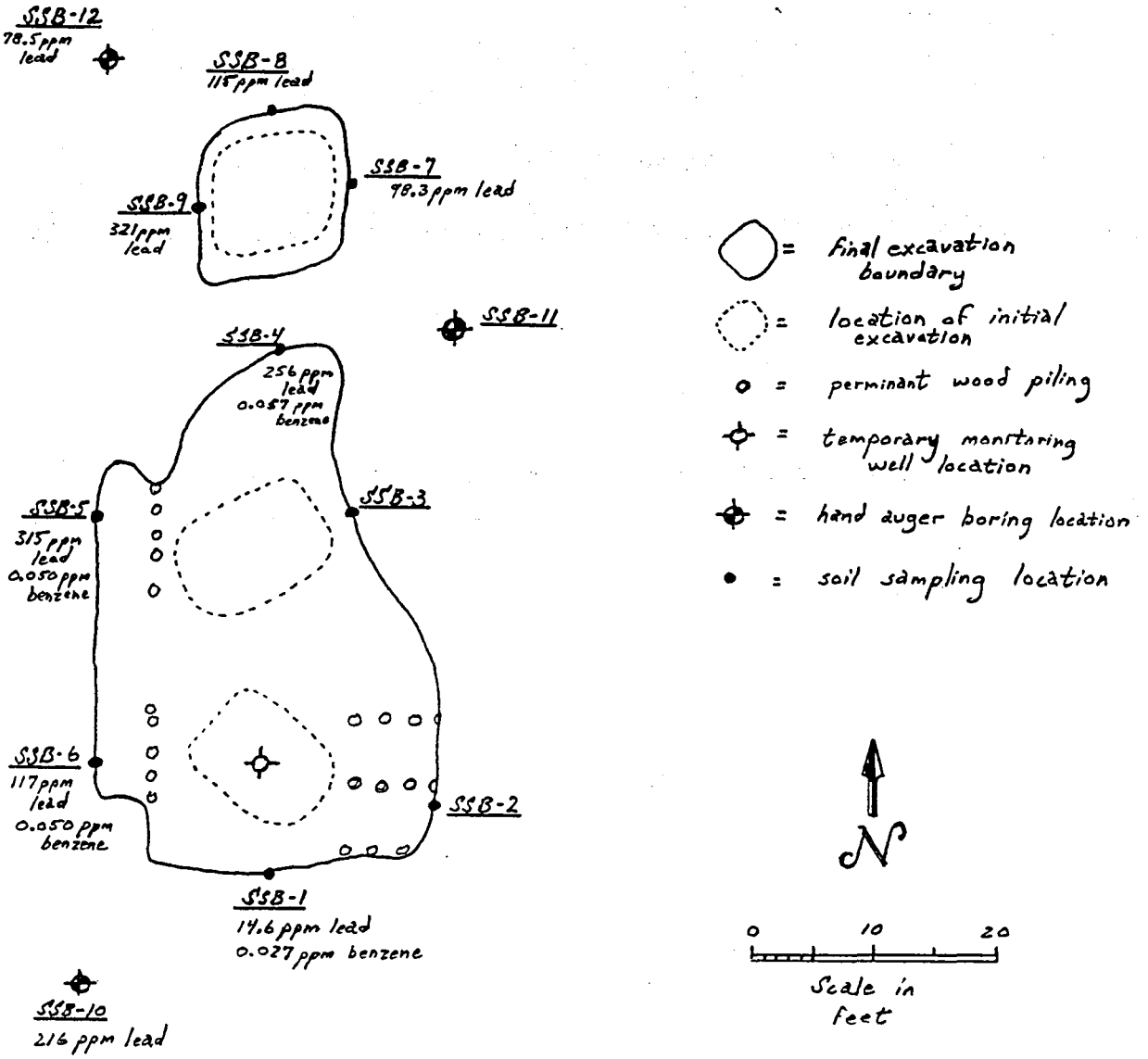


Figure 3
Initial Site Excavations
Hughitt Slip Property
Superior, Wisconsin



- Hughitt Slip -

Figure 4
Final Excavations/Additional Test Borings
Hughitt Slip Property
Superior, Wisconsin

TABLES

Table 1
Phase II Soil Analysis Results
Hughit Slip Property
Superior, Wisconsin

Parameter	Soil Sample Number Sampling Location Concentration in ppm			Wisconsin DNR Interim Soil Cleanup Guideline	Concentration Requiring Additional Analyses (TCLP)
	SS1 Site 1 adjacent to concrete pad	SS2 Site 2 north of concrete pad	SS3 Site 3 near vehicle turnaround		
Diesel Range Organics	10,300	45.1	456	100	--
Toluene	0.372	<	<	1.5	--
Xylenes	1.09	0.373	0.386	4.1	--
1,3,5-trimethylbenzene	0.990	<	<	--	--
1,2,4-trimethylbenzene	0.874	<	0.232	--	--
Lead	222	92.9	46.5	--	100
Chromium	16.1	65.1	9.05	--	100
Lead (TCLP analysis)	<	--	--	5.0	N/A

ppm = parts per million, equivalent to milligrams per kilogram, or mg/kg
< = concentration below laboratory method detection limits
-- = guideline not established/analysis not performed
TCLP = toxicity characteristics leaching procedure

Table 2
Field Screening Results, Initial Excavations
Hughitt Slip Property
Superior, Wisconsin

Location	Sample Number	Organic Vapor Concentration (ppm)
Excavation Site 1	SV1-1	31.5
	SV1-2	67.0
	SV1-3	71.7
	SV1-4	12.8
	SV1-5	4.9
Excavation Site 2	SV2-1	0.0
	SV2-2	0.0
	SV2-3	0.0
	SV2-4	0.0
	SV2-5	0.0
Excavation Site 3a	SV3a-1	11.3
	SV3a-2	96.2
	SV3a-3	127
	SV3a-4	134
	SV3a-5	155
Excavation Site 3b	SV3b-1	3.3
	SV3b-2	2.7
	SV3b-3	2.4
	SV3b-4	2.1
	SV3b-5	3.9
Excavation Site 3c	SV3c-1	3.3
	SV3c-2	1.8
	SV3c-3	1.8
	SV3c-4	1.5
	SV3c-5	1.5

Note:
* Organic vapor concentrations provided in parts per million (ppm)
* All soil vapor samples were collected at the excavation bases, 1½ to 2½ feet below the surface.

TABLE 3
Analysis Results
Initial Excavations
Hughitt Slip Property
Superior, Wisconsin

Location	Soil Sample Number	Parameter, concentration (ppm)								
		DRO	Benzene	Toluene	Ethylbenzene	Xylenes	1,3,5-TMB	1,2,4-TMB	MTBE	Lead
Site 1	SS1A	5.10	< (at 0.005)	<	<	<	<	<	<	<
Site 2	SS2A	<	< (at 0.005)	<	<	<	<	<	<	<
Site 3a	SS3Aa	4240	< (at 0.025)	0.765	0.238	2.51	1.31	8.41	<	254
Site 3b	SS3Ab	11.8	0.019	0.219	<	<	<	<	<	257
Site 3c	SS3Ac	8.26	< (at 0.010)	<	<	<	<	<	<	160
Wisconsin DNR Interim Soil Cleanup Guideline/Maximum Allowable Leachable Metal Concentration		100	0.0055	1.5	2.9	4.1	--	--	--	--

DRO - diesel range organics
MTBE - methyl tertiary butyl ether
(at___) - laboratory method detection limit
ppm - parts per million, equivalent to milligrams per kilogram or mg/kg
< - concentration below laboratory method detection limits
TMB - trimethylbenzene

TABLE 4
Field Screening Results
Final Excavations
Hughitt Slip Property
Superior, Wisconsin

Soil Vapor Sample (Sample #)	Depth in Feet	PID Reading in ppm
SV-1	1.5	0.0
SV-2	2.5	0.0
SV-3	1.5	0.0
SV-4	2.5	0.0
SV-5	1.5	0.0
SV-6	2.5	0.0
SV-7	1.5	0.0
SV-8	2.5	0.0
SV-9	1.5	146*
SV-10	2.5	90.0*
SV-11	1.5	40.0*
SV-12	2.5	50.7*
SV-13	1.5	5.1*
SV-14	2.5	1.1*
SV-15	1.5	0.0
SV-16	2.5	0.4
SV-17	1.5	0.0
SV-18	2.5	0.0
SV-19	1.5	0.0*
SV-20	2.5	29.9*
SV-21	1.5	0.0

Soil Vapor Sample (Sample #)	Depth in Feet	PID Reading in ppm
SV-22	2.5	0.0
SV-23	1.5	0.0
SV-24	2.5	0.0
SV-25	1.5	0.0
SV-26	2.5	0.0
SV-27	1.5	0.0
SV-28	2.5	0.0
SV-29	1.5	0.0
SV-30	2.5	0.0
SV-31	1.5	0.0
SV-32	2.5	0.0
SV-33	1.5	0.0
SV-34	2.5	0.0
SV-35	1.5	0.0
SV-36	2.5	0.0

Notes:
PID = photoionization detector
ppm = parts per million organic vapors
* = area excavated following sample collection and field screening

During the field work, the water table appeared to lie approximately 2.5 feet below the surface.

TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameter, Concentration (ppm)								
Location	Sample #	DRO	VOCs							
			Benzene	Toluene	Ethylbenzene	Xylenes	1,3,5-TMB	1,2,4-TMB	MTBE	sec-BB
Excavation Enlargement Area of Sites 3a & 3b	SSB-1	<	0.027	0.077	<	<	<	<	0.098	--
	SSB-2	<	<	<	<	<	<	<	<	--
	SSB-3	<	<	<	<	<	<	<	<	--
	SSB-4	61.5	0.057	0.094	0.050	0.160	0.036	0.052	<	--
	SSB-5	29.2	0.050	0.081	0.052	0.190	0.047	0.064	<	--
	SSB-6	22.3	0.050	0.084	0.053	0.180	0.043	0.059	<	--
Excavation Enlargement Site 3c	SSB-7	<	<	<	<	<	<	<	<	--
	SSB-8	<	<	0.049	0.044	0.140	0.039	0.051	<	--
	SSB-9	71.1	<	0.060	0.058	0.180	0.053	0.061	<	--
Test Borings	SSB-10	--	<	<	<	<	<	0.026	--	0.026
	SSB-11	--	<	<	<	<	<	<	--	<
	SSB-12	--	<	<	<	<	<	<	--	<
	SB-13 (control)	--	--	--	--	--	--	--	--	--
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		100	0.0055	1.500	2.900	4.100	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
MTBE = methyl tertiary butyl ether
< = concentration below laboratory method detection limit
VOCs = volatile organic compounds
DRO = diesel range organics
BB = butylbenzene
TCB = trychlorobenzene
-- = analysis not performed/DNR guideline does not exist

TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameter, Concentration (ppm)							
Location	Sample #	VOCs				Lead	PAHs		
		n-BB	Naphthalene	1,2,3-TCB	1,2,4-TCB		Acenaphthene	Anthracene	Benzo[a]anthracene
Excavation Enlargement Sites 1 & 2	SSB-1	--	--	--	--	14.6	--	--	--
	SSB-2	--	--	--	--	<	--	--	--
	SSB-3	--	--	--	--	<	<	<	0.0260
	SSB-4	--	--	--	--	256	--	--	--
	SSB-5	--	--	--	--	315	--	--	--
	SSB-6	--	--	--	--	117	0.419	0.0324	0.156
Excavation Enlargement Site 3	SSB-7	--	--	--	--	98.3	--	--	--
	SSB-8	--	--	--	--	115	--	--	--
	SSB-9	--	--	--	--	321	0.859	0.0807	0.421
Test Borings	SB-10	0.049	0.037	0.035	<	216	<	0.473	0.708
	SB-11	0.035	<	<	0.040	<	<	<	<
	SB-12	0.042	0.026	0.027	0.048	78.5	<	0.0930	0.392
	SB-13 (control)	--	--	--	--	--	<	<	0.00829
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		--	--	--	--	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
MTBE = methyl tertiary butyl ether
< = concentration below laboratory method detection limit
VOCs = volatile organic compounds
DRO = diesel range organics
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-- = analysis not performed/DNR guideline does not exist

TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameters, Concentrations (ppm)					
Location	Sample #	PAHs					
		Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthane	Benzo[g,h,i]perylene	Chrysene	Dibenzo[a,h]anthrancene
Excavation Enlargement Sites 1 & 2	SSB-1	--	--	--	--	--	--
	SSB-2	--	--	--	--	--	--
	SSB-3	0.0237	0.0195	0.0116	<0.0640	0.0363	<0.040
	SSB-4	--	--	--	--	--	--
	SSB-5	--	--	--	--	--	--
	SSB-6	0.134	0.117	0.0614	<0.320	0.235	<0.200
Excavation Enlargement Site 3	SSB-7	--	--	--	--	--	--
	SSB-8	--	--	--	--	--	--
	SSB-9	0.387	0.249	0.146	<0.640	0.618	<0.400
Test Borings	SB-10	0.892	0.734	0.270	<	<	<
	SB-11	0.00887	0.00735	0.00347	<	<	<
	SB-12	0.610	0.476	0.172	0.302	0.508	<
	SB-13 (control)	0.0163	0.0145	0.00696	0.00429	<	<
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		--	--	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
MTBE = methyl tertiary butyl ether
< = concentration below laboratory method detection limit
VOCs = volatile organic compounds
DRO = diesel range organics
BB = butylbenzene
TCB = trychlorobenzene
-- = analysis not performed/DNR guideline does not exist

TABLE 5
ANALYSIS RESULTS
FINAL EXCAVATIONS/ADDITIONAL TEST BORINGS
HUGHITT SLIP PROPERTY
SUPERIOR, WISCONSIN

Soils		Parameter, Concentration (ppm)						
Location	Sample #	PAHs						
		Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methyl Naphthalene	Naphthalene	Phenanthrene	Pyrene
Excavation Enlargement Sites 1 & 2	SSB-1	--	--	--	--	--	--	--
	SSB-2	--	--	--	--	--	--	--
	SSB-3	0.0512	<	<0.0160	--	<	0.0186	0.0605
	SSB-4	--	--	--	--	--	--	--
	SSB-5	--	--	--	--	--	--	--
	SSB-6	0.447	<	<0.080	--	<	0.223	0.503
Excavation Enlargement Site 3	SSB-7	--	--	--	--	--	--	--
	SSB-8	--	--	--	--	--	--	--
	SSB-9	1.120	<	<0.160	--	<	0.713	1.290
Test Borings	SB-10	2.250	0.255	0.501	0.191	0.401	1.890	2.400
	SB-11	0.0253	<	<	0.00950	0.00517	0.0285	<
	SB-12	1.530	<	0.353	<	0.0609	0.275	0.964
	SB-13 (control)	0.0467	<	0.00710	.0163	0.00950	0.0406	<
Wisconsin DNR Enforcement Standard/Interim Soil Cleanup Guideline		--	--	--	--	--	--	--

ppm = parts per million, equivalent to milligrams per kilogram (mg/kg)
PAHs = polynuclear aromatic hydrocarbons
TMB = trimethylbenzene
MTBE = methyl tertiary butyl ether
< = concentration below laboratory method detection limit
VOCs = volatile organic compounds
DRO = diesel range organics
BB = butylbenzene
TCB = trychlorobenzene
-- = analysis not performed/DNR guideline does not exist

TABLE 6
Groundwater Analysis Results
Hughitt Slip Property
Superior, Wisconsin

Sample # Collection Date	Parameter, Concentration (ppb)					
	DRO	VOCs			Lead	PAHs
		Toluene	n-Butylbenzene	Naphthalene		
WS-1 1/17/96	492	<	--	--	<	--
WS-2 5/30/96	113	<	1.4	3.0	11.1	<
Field Blank 5/30/96	--	2.1	<	<	--	--
Wisconsin DNR Enforcement Standard	--	343	--	40	15	various

ppb - parts per billion, equivalent to micrograms per kilogram (mg/kg)
DRO - diesel range organics
VOCs - volatile organic compounds
PAHs - polynuclear aromatic hydrocarbons
< - concentration less than laboratory method detection limits
-- - analysis not performed/enforcement standard not established

APPENDICES

Appendix A
WGNHS Records Search Documentation

University of Wisconsin–Extension
Wisconsin Geological and Natural History Survey
3817 Mineral Point Road · Madison, WI 53705-5100
TELEPHONE 608/262.1705 · FAX 608/262.8086
James M. Robertson, *Director and State Geologist*

FACSIMILE TRANSMISSION COVER SHEET

DATE 5/28/96

FROM K. Massie-Ferch DIRECT TELEPHONE 608-262-9468

FAX NUMBER: 608/262-8086 MAIN OFFICE TELEPHONE: 608/262-1705

TO Jon Hinkel

FAX NUMBER 218-722-3295 TELEPHONE NUMBER 218-722-1911

ORGANIZATION/ADDRESS Twin Ports Testing, Inc.

NUMBER OF PAGES, INCLUDING COVER PAGE 3
[Please let us know if all pages are not received.]

COMMENTS:

You requested construction reports for
Sec 10 & 11, 49N, 14W
or geologic logs.
There are no records in this area.

Appendix B
DNR Soil Treatment Authorization Permit

Timmes

APPLICATION TO TREAT OR DISPOSE OF PETROLEUM CONTAMINATED SOIL ASPHALT PLANT OR OTHER TYPE OF THERMAL TREATMENT UNIT

Form 4400-149

Received 11/27 from Lakehead Truck T... -RJ

This form is required by the Department of Natural Resources for leaking underground storage tank sites to ensure that petroleum contaminated soil is treated or disposed of in compliance with NR 500-540, NR 158, and NR 419, Wis. Adm. Code. Failure to comply with applicable statutes and administrative rules may lead to violations of subchapters III and IV of ch. 144 Wis. Stats. and may result in forfeitures of not less than $10 or more than $25,000 for each violation, pursuant to ss. 144.426(1), 144.74 (1), and 144.99, Wis. Stats., or fines of not less than $100 or more than $150,000 or imprisonment for not more than 10 years, or both, pursuant to s. 144.74 (2), Wis. Stats. Each day of a continuing violation constitutes a separate violation. Department approval of this form is required prior to site remediation, except for soils to be buried in landfills.

DIRECTIONS: 1) Complete parts I and II. 2) Submit the application to the DNR project manager for approval. 3) Have the treatment facility complete part III of the approved form after the soil has been treated. 4) Return the ORIGINAL form to the DNR project manager. 5) Keep a copy for your files.

ALL SITES MUST COMPLETE PART I.

Part I. Source of Soil

Site/Facility Name: Hughitt Slip Property

Site I.D. # (for DNR use only):

Site Address: (no street address; see attached map)

Contact Name: Norman & Donna Camenker

City, State, Zip Code: Superior, Wisconsin 54880

1/4, 1/4, Section, Township, and Range: NE¼, SE¼ Sec. 10, T49N, R14W

The information on this form is accurate to the best of my knowledge.

Signature of Soil Generator: X Donna Camenker

Telephone Number (include area code): (715) 392-5457

Consulting Firm	Contact	Telephone Number
Twin Ports Testing, Inc.	Jon Hinkel	(218) 722-1911

Estimated Volume Contaminated Soil

18 Tons/cubic yards (circle one)

Soil Type (USCS)

- ___ sand (SP, SW)
- ✓ silty/clayey sands (SM, SC)
- ___ silt (ML, MH, OL)
- ___ clay (Cl, CH, OH)
- ✓ gravel (GC, GM, GP, GW)
- ___ peat (PT)

} fill materi... mixture o... soils

Type of Petroleum Contamination (Circle):

Gasoline Diesel Fuel/#2 Fuel Oil

Other Waste Oil

Distance to Nearest Residence/Business 800 ft.

Contaminant concentration:

One screened sample for each 15 yds³ and one laboratory analysis for each 300 yds³ of contaminated soil when the field instrument *registers contamination* OR one laboratory analysis for each 100 yds³ when the field instrument *does not register contamination* on soil shown to be contaminated during the site investigation/excavation or stockpiling. PLEASE ATTACH A TABLE LISTING RESULTS OF BOTH FIELD SCREENING AND LAB ANALYSES, AND INCLUDE SUPPORTING LAB REPORTS, IN ADDITION TO THE TPH AND BENZENE INFORMATION REQUESTED BELOW. NOTE: DILHR requires a minimum of 3 laboratory samples on excavated soil for PECFA claims.

Total Benzene in soil to be remediated (attach calculations) < 0.010 lbs

Total Petroleum Hydrocarbons(TPH) in soil to be remediated (attach calculations) 519 lbs

Total TPH as diesel range organics

ATTACH EMISSIONS CALCULATIONS

(a/1,000,000) x (2,800 lbs/yd^3) x b = benzene emission in lbs., where a = benzene concentration of soil sample in ppm or mg/kg dry weight basis, and b = amount of contaminated soil in yds^3. NOTE: This calculation can also be used to estimate TPH emissions by substituting TPH concentration (ppm or mg/kg) for "a". It may also be used to calculate VOCs.

Part II: Proposed Treatment Facility

Name of Plant: Lakehead Blacktop & Mtls.

Plant number and Model: Madson 4000 lb. Batch Plan

Contact: Mr. Joe Kimmes

DNR Facility I.D. No.: 816037640

Address: 6327 Tower Ave.
(or location of portable plant) Superior, WI 54880

Distance to Nearest Residence/Business: 5000 Ft.

- LEAVE BLANK - DEPARTMENT OF NATURAL RESOURCES USE ONLY

Application Concurrence:

Air Management: Phyllis Holmbeck — Date: 9/22/95

Project Manager: ______ Date: ______

Comments:

THIS SECTION TO BE COMPLETED BY THE ASPHALT/THERMAL UNIT PROCESSING THE CONTAMINATED SOIL
AFTER PROCESSING IS COMPLETED

Part III

WDNR Air Pollution Control Permit Number: ......

Actual Volume of Soil Treated (tons/(cubic yards) circled): 16 yds

Date of transport to plant: September 26, 1995

Date of treatment: November 8, 1995

Transporter Name: Earth Movers of Duluth

Transporter License Number: N/A

Circle One: (Roasted and Incorporated) — circled   Roasted Only

Total Benzene emissions in pounds for this batch (apply ~~50%~~ 99% Factor w/afterburner destruction factor if no after burner is used): 0.0001 Lbs

Benzene emissions to date for this plant (including this batch) for this calendar year: 2.4487 Lbs

Signature of Treatment plant representative: [illegible]

Telephone Number at Plant: 715-392-1989

POST BURN SAMPLE RESULTS: COMPLETE ONLY FOR SOILS NOT INCORPORATED!

(One representative sample for each 100 cubic yards-not composites)

Sample Number ______ ______ ______ ______

TPH ______ ______ ______ ______

DNR APPROVAL IS REQUIRED BEFORE USING AS COMMON FILL

Date of backfilling or use as common fill ...... Location of fill site ____1/4____1/4____S____T____R

TOTAL BENZENE CALCULATION:

$$\left(\frac{< 0.2\ mg/kg}{1{,}000{,}000}\right) \times \left(\frac{2{,}800\ lbs.}{1\ cu\ yrd}\right) \times (18\ cu\ yrds) = < 0.010\ lbs.\ benzene$$

$\frac{0.2}{1{,}000{,}000} \times 2800 \times 18\ yds = 0.0090$ Lbs

99% Factor w/attributed = 0.0001 Lbs

~~Det. level~~

TOTAL PETROLEUM HYDROCARBONS CALCULATION:

$$\left(\frac{10{,}300\ mg/kg}{1{,}000{,}000}\right) \times \left(\frac{2{,}800\ lbs.}{1\ cu\ yrd}\right) \times (18\ cu\ yrds) = 519\ lbs.\ TPH$$

Feed rate Calc.

@ 98% dist.

$$x\ tons/hr = \frac{(9\ lb/hr) * (1.4\ ton/yd^3) * 18\ yd^3}{515\ lb\ DRO * (1 - 0.98)}$$

$$= 21.85\ yd^3/hr.$$

Appendix C
DNR Correspondence, 12/8/95

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
TELEFAX 715-372-4836

George E. Meyer
Secretary

December 8, 1995

Received 12/11/95
RJH

MR AND MRS NORMAN CAMENKER
70 HIGHGATE ROAD
SUPERIOR WI 54880

SUBJECT: Petroleum Contamination at the Hughitt Slip Property, Superior, Wisconsin

Dear Mr. and Mrs. Camenker:

The Department has received the Phase II Sampling and Testing Results, prepared for the above named site by Twin Ports Testing, Inc. (TPT) and dated September 12, 1995, and the Preliminary Results - Remedial Action, also prepared by TPT and dated November 29, 1995. These reports describe investigative and remedial actions taken by TPT in response to environmental contamination encountered on this property during a Phase I investigation.

Based on the information we have received, the Department believes that you are responsible for restoring the environment at this site under Section 144.76, Wisconsin Statutes, 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 twofold: 1) to describe your legal responsibilities, and 2) to provide you with the results of the Department's review of the work that has been completed to date.

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative rules. The hazardous substances spill law, Section 144.76 (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 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 NR 140 establishes groundwater standards.

Department Review of Previous Work:

After reviewing the reports submitted by TPT, it is apparent that additional remedial actions are necessary here. The sample collected at the base of excavation 3a contained DRO levels in excess of the ch. NR 720, Wis. Adm. Code, soil cleanup standards. You should work with TPT to formulate a plan to fully define and remediate the contamination remaining at this site, and to properly treat or dispose of the excavated contaminated soil in accordance with ch. NR 718, Wis. Adm. Code.

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 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:

Christopher A. Saari
WDNR Brule Area Headquarters
6250 S. Ranger Rd.
PO Box 125
Brule, WI 54820-0125

Unless otherwise requested, please send only one copy of all plans and reports. Correspondence should be identified with the assigned DNR identification number which will be assigned to your site within 7 days.

Additional Information:

If you are interested in obtaining the protection of limited liability under s. 144.765, Stats., please contact the Contaminated Land Recycling Program at (800) 367-6076 (instate long distance) or (608) 264-6020 (local or out of state), in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 144.765 Stats., is available to persons who meet the definition of "purchaser" in s. 144.765 (1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

If you have any questions about this letter or your responsibilities, please call me at (715) 372-4866.

Thank you for your cooperation.

Sincerely,

Christopher A. Saari
Hydrogeologist

Attach.

cc: Jon Hinkel - Twin Ports Testing, Inc.

Appendix D
TPT Proposal/Work Plan 95P-183E

SINCE 1972

TWIN PORTS TESTING INC.

1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
(715) 392-7114 • FAX (715) 392-7163

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
(218) 722-1911 • FAX (218) 722-3295

8 INDUSTRIAL PARK ROAD • NEGAUNEE, MICHIGAN 49866
(906) 226-6653 • FAX (906) 226-3699

Job # 599-95E.RA

December 21, 1995

Proposal 95P-183E

Norman and Donna Camenker
70 Highgate Ct.
Superior, Wisconsin 54880

(Job file copy)

Re: Continuation of Remedial Action
Hughitt Slip Property
Superior, Wisconsin

Dear Mr. and Mrs. Camenker:

Since you and I last spoke, Mr. Chris Saari of the Wisconsin Department of Natural Resources (DNR) has responded to Twin Ports Testing, Inc's. (TPT's) reports of the contamination encountered on the Hughitt Slip property in Superior, Wisconsin, in a correspondence, dated December 8, 1995. The correspondence indicated that the DNR's present concern regarding the property lies with the elevated contaminant concentrations remaining in the 3a excavation soils. Though no mention was made in the correspondence specifying a concern regarding the site's groundwater, it is TPT's opinion that the DNR site closure committee will require confirmation of groundwater integrity as well as confirmation of soil integrity for the property's sites before closure will be granted. Mr. Saari concurs with TPT's opinion (TPT telephone communication with Chris Saari, 12/12/95).

In an effort to better assess the soil conditions at each of the excavated sites, TPT recently directed the laboratory to re-evaluate the analyses results of the September excavation soil samples with regard to detection limits of the petroleum volatile organic compound (PVOC) parameters. The laboratory responded by reporting their detection limits for these parameters well below the original detection limits of 200 parts per billion (ppb; see laboratory report revision, attached). The revised laboratory reports indicate no detections of benzene for sites 1 and 2 at concentrations at or above 5 ppb. The analytical results for all parameter concentrations of the soil samples of sites 1 and 2 are thus confirmed to lie below DNR Interim Soil Cleanup Guidelines (see attached listing); no additional environmental work should be required at either of these sites by the DNR.

With regard to the individual sites of 3a, 3b and 3c, it appears that DRO and/or benzene concentration lie above or may lie above current DNR Interim Soil Cleanup Guidelines. Such results serve to indicate the need for further cleanup efforts as determined by the DNR.

WORK PLAN

TPT proposes enlarging the present excavations numbered 3a, 3b, and 3c in all directions in an effort to remove remaining contaminated soil. The excavations would be conducted using a backhoe as before, guided by a TPT Environmental Technician using a portable photoionization detector (PID) according to standard jar-headspace procedure. Laboratory conformation soil samples would be collected from the excavation's bases and sidewalls and transported to the laboratory according to standard chain-of-custody procedures. Excavated soils would be loaded directly into dump trucks for transport to an appropriate remediation/disposal facility. Any groundwater entering the excavations would be pumped into a tanker truck for disposal with an appropriately permitted agency or firm.

The excavations would be backfilled using uncontaminated soil imported from a separate locality. During backfilling, one to three screen - riser assemblies would be installed in the excavated area to serve as collection points for groundwater sampling. Efforts would be made to develop these temporary groundwater collections points as fully as possible, with one or more groundwater samples collected for submission to the laboratory.

Laboratory soil and groundwater samples would be analyzed for diesel range organics (DRO), petroleum volatile organic compounds (PVOC) and lead. Polynuclear aromatic hydrocarbon (PAH) analyses would be conducted for soil and groundwater samples collected from the general area of site 3a.

Following completion of the field work, a report would be prepared summarizing the project's methods and results for review by you as well as the DNR.

ESTIMATED COSTS

At present, TPT is in the process of gathering estimates from various firms and contractors for the excavation, hauling and disposal of the site's remaining contaminated soil; the pumping, trucking and disposal of any groundwater which may accumulate in the excavations during soil removal; and the delivery of backfill material. As the various estimates are received, TPT will make them available to you for comparison. Following your acceptance of the appropriate firms or contractors, TPT will schedule the field work and continue with the project as planned. Preliminary groundwater sampling and analysis is anticipated as a requisite to gaining a cost effective means of any wastewater disposal which may be necessary.

FIELD WORK

Contractor:

Excavation, and trucking: petroleum contaminated soil (est. 200 cubic yards or less)	$ To be determined
Disposal: petroleum contaminated soil	$ To be determined
Removal of wastewater from excavation (est. 2300 gallons or less)	$ To be determined
Treatment/disposal: excavation wastewater	$ To be determined

Environmental Consultant:

Preliminary groundwater sample collection; excavation monitoring; soil sample collection and field screening; screen-riser assembly installation(s); development and groundwater sample collection (Environmental Technician I: est. 12-15-hours)	$ 552.00 - 690.00
Equipment and Supplies (vehicle, PID, sample jars, 1-3 screen-riser assemblies, 1-3 disposable bailers, lead filters, disposable sampling gloves)	$ 214.00 - 338.00

LABORATORY ANALYSES

Soils:	
8-15 samples: DRO, PVOC, Lead 1-3 samples: PAH	$ 1171.00 - 2370.00
Groundwater (including field blank):	
2-4 samples: DRO, PVOC, Lead, PAH 1 sample: TPH, BTEX, Lead	$ 465.00 - 803.00

PROJECT MANAGEMENT/REPORTING

Environmental Consultant: (Environmental Technician II, est. 20-30 hours; Environmental Dept. Manager, est. 2 hours; Secretarial Services)	$ 1190.00 - 1700.00

SCHEDULE

It is anticipated that the remainder of the cost estimates will be available within one week. Following your approval of the necessary contractors or firms, we anticipated that the project's field work may commence within two weeks thereafter. The project's final report should be available within one month of the field work's commencement.

We appreciate the opportunity to submit this proposal and look forward to working with you on the project. If you have any questions regarding this proposal, please feel free to contact us at (906) 226-6653 or (218) 722-1911.

Sincerely,

TWIN PORTS TESTING, INC.

Jon Hinkel, Geologist

Brian E. McVean, P.E.
Environmental Department Manager

RJH:pjd

Attachments: Revised Laboratory Reports
DNR Interim Soil Cleanup Guidelines

This proposal is being provided to you in duplicate. If you agree to accept this proposal, along with the General Conditions of Service, please sign and return one copy to us to use as our authorization to proceed with this project.

Signed _____

Date 12/21/95

Printed Name DONA CAMENKER

Title _____

Company _____

Appendix E
DNR Correspondence, 12/28/95

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
TELEFAX 715-372-4836

George E. Meyer
Secretary

December 28, 1995

MR AND MRS NORMAN CAMENKER
70 HIGHGATE COURT
SUPERIOR WI 54880

Re: Petroleum Contamination at the Hughitt Slip Property (NWD ERP Case #16-00170), Superior, Wisconsin

Dear Mr. and Mrs. Camenker:

The Department has received the work plan for Continuation of Remedial Action at the above named site, prepared by Twin Ports Testing, Inc. (TPT) and dated December 21, 1995.

After reviewing the proposal, the Department finds it to be acceptable, and we encourage you to instruct TPT to proceed with the measures specified in the work plan. As was pointed out in the work plan, it is likely that some type of continued groundwater monitoring will be necessary before this case could be reviewed for closure.

If you have any questions concerning this letter or the project in general, please do not hesitate to write or call me at 715/372-4866.

Sincerely,

Christopher A. Saari
Hydrogeologist

cc: Jon Hinkel - Twin Ports Testing, Inc.

Appendix F
DNR Soil Disposal Authorization Permit

original delivered to Phyllis Holmbeck by RJH, 1/4/95 4:30 pm

State of Wisconsin
Department of Natural Resources

NOTIFICATION TO TREAT OR DISPOSE OF PETROLEUM CONTAMINATED SOIL & WATER

Form 4400-120
Rev. 9-95

This form is required by the Department of Natural Resources (DNR) to ensure that the remediation of petroleum contaminated soil and water is in compliance with NR 500-540, NR 158, NR 419 and NR 445, Wis. Adm. Code. Failure to comply with applicable statutes and administrative rules may lead to violations of subchapters III and IV of Ch. 144, Wis. Stats. and may result in forfeitures of not less than $10 or more than $25,000 for each violation, pursuant to ss. 144.426(1), 144.74(1), 144.99, Wis. Stats., or fines of not less than $100 or more than $150,000 or imprisonment for not more than 10 years, or both, pursuant to s. 144.74(2), Wis. Stats. Each day of a continuing violation constitutes a separate violation. **Except for the remediation of virgin petroleum spills, this form needs to be submitted to the DNR 10 business days prior to the commencement of the remediation.**

DIRECTIONS: 1) Complete both sides of the form. 2) Have the responsible party sign the form. **This signature certifies that the information on this form and in all supporting documents is accurate.** 3) Submit the form with supporting documentation, lab reports and any maps to the appropriate District Air Management Program at least 10 business days prior to the commencement of remediation. 4) Submit a copy of this form to the DNR project manager and retain a copy for your records.

PART I - GENERAL INFORMATION

Site Name & Address: Hughitt Slip Property Superior, Wisconsin (no street address - see attached maps)	Date of Form Completion: January 4, 1996
Site #: Excavation #3 area (see Figure 3, attached)	Do Other Remediation Systems Exist at This Site? ☐ YES ☑ NO
County: Douglas	Site Type: ☐ LUST ☐ ERP ☐ CERCLA ☐ Other, Explain: spill site - apparently waste oil
Responsible Party Name & Address: Norman & Donna Camenker 70 Highgate Court Superior, Wisconsin 54880	Responsible Party Signature: Donna Camenker Telephone #: (715) 392-5457 (WI) (602) 855-4825 (Ariz.)
Consulting Firm Name & Address: Twin Ports Testing, Inc. 728 Garfield Avenue Duluth, Minnesota 55802	Consulting Firm Contact: Jon Hinkel, geologist Telephone #: (218) 722-1911

PART II - SOIL AND WATER DATA (Attach Lab Reports and Calculations) *

Type of Contamination: ☐ Gasoline ☐ Diesel ☐ Fuel Oil ☑ Waste Oil
☐ Chlorinated Organics ☐ Other: _____

Soil Concentration:

GRO: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

DRO: 2370 lb — 4240 mg/kg/10^6 x 2,800 lb/yd^3 x 200 yd^3 = 2370

Benzene: < .025 mg/kg/10^6 x 2,800 lb/yd^3 x 200 yd^3 = < 0.014 lb

Chlorinated Organics: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

Other: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

Water Concentration: GRO: _____ mg/L DRO: _____ mg/L Benzene: _____ mg/L

Chlorinated Organics: _____ mg/L Other: _____ mg/L

PART III - TREATMENT OR DISPOSAL FACILITY INFORMATION

Treatment/Disposal Facility Name & Address:
Jackson County Landfill, Inc.
Route 3 Box 953
Black River Falls, WI 54615

Facility ID:
02004

Air Pollution Control Permit #:
Not necessary

Facility Contact: Alina Limberg
Telephone #: (715) 284-2262

Facility Located in 10-county Area in Southeast Wisconsin: No

Distance to Nearest Residence or Business:
1 ½ miles

Headquarter Address:
Same as above.

Portable Sources Only: Has a Portable Source Relocation Notification (Form 4500-25) Been Submitted for this Location: ☐ YES ☐ NO N/A

* Please note: the concentrations provided for DRO and Benzene are maximum readings; the bulk of our sample analyses results are much lower concentrations.

PART III - SOIL VACUUM EXTRACTION OR GROUNDWATER REMEDIATION

Site Contact & Telephone #:	Proposed Operations (Attach Calculations) Anticipated Start-Up Date:
Is Site Located in the 10-county Area in	Estimated Project Duration:
Distance to Nearest	# of Wells:
Pilot Test/Soil Venting Only (Attach Lab Reports and Calculations) Date of Test: Flow Rate (scfm): - Not Applicable - Total Withdrawal of Air (scf): Total VOC Emission Rate (lb/hr): Benzene Emission Rate (lb/hr):	# of Emission Points: Stack Height: - Not Applicable - Maximum Equipment Flow Rate (scfm or gpm): Total VOC Emission Rate (lb/hr): Benzene Emission Rate (lb/hr): Benzene Emission Rate (lb/yr):

PART III - OTHER REMEDIATION METHODS

Proposing Other Remediation Method: ☐ YES Method Name: _____

Attach a project description for other remediation methods including landspreading, passive aeration and bioremediation. At a minimum, the information submitted should include the following items (with any supporting lab reports and calculations):

✓ Address/Location of Remediation Site - Indicate if this location is in the 10-county area in Southeast Wisconsin and the distance to the nearest residence or business. Include a map or site plan if appropriate.

✓ Description of Remediation Method

✓ Project Contact & Telephone #

✓ Anticipated Start-Up and Estimated Project Duration - Not Applicable -

✓ Highest Estimated Hourly VOC Emissions

✓ Highest Estimated Hourly and Annual Benzene Emissions

✓ Emission Testing Methodology

✓ Final Destination of Soil

Appendix G
WLSSD Approval for Waste Water Acceptance

2626 COURTLAND STREET DULUTH, MINNESOTA 55806-1894 PHONE 218/722-3336
FAX 218/727-7471

May 24, 1996

Mr. Jon Hinkel
Twin Ports Testing
728 Garfield Avenue
Duluth, MN 55802

Re: WLSSD Discharge Approval

Dear Mr. Hinkel:

The data provided on **5/24/96** , as requested, meets the WLSSD discharge requirements for this type of waste. Based on this information, the WLSSD approves the discharge of approximately **2,000 gallons** of water that was recovered from **an excavation site located in Superior Wisc. adjacent to the Hughitt Slip** provided that there is no visual sign of oil, grease or other petroleum related products or other sources of contaminates. This contaminated water is to be disposed of at the WLSSD's main treatment facility which is located at 2626 Courtland in Duluth.

This is a one time only approval for the waste described. It does not release **Twin Ports Testing** from any conditions/regulations set forth by the MPCA and/or any other agency which regulates the waste being discharged. In addition, this approval does not release **Twin Ports Testing or any consultant/contractor** involved from any subsequent liabilities associated with conducting this discharge.

A copy of this letter of approval and analysis is to accompany each load that is to be disposed of and given to the gatekeeper.

If there are any questions, please contact me at 722-3336 ext. 239.

Sincerely,

Mike Guite
Supervisor of Laboratory/Analytical Services

cc: Gate House

Appendix H
DNR Correspondence, 2/23/96

- DK2/24

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, District Director

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
TELEFAX 715-372-4836

February 23, 1996

MR & MRS NORMAN CAMENKER
70 HIGHGATE COURT
SUPERIOR WI 54880

Re: Petroleum Contamination at the Hughitt Slip Property (NWD ERP Case #16-00170)

Dear Mr. and Mrs. Camenker:

The Department has received the proposal for further soil and groundwater sampling at the above named site, prepared by Twin Ports Testing, Inc. (TPT), and dated February 20, 1996. After reviewing the proposal, the Department feels that the soil sampling protocol should be modified to include full Volatile Organic Compound (VOC), Polynuclear Aromatic Hydrocarbon (PAH) and lead (Pb) analyses at each of the three locations intended to define the degree and extent of contamination. The full VOC sampling is necessary due to the unknown nature of the contaminants. The Department is suggesting the collection of the PAH samples because, if TPT fails to demonstrate that previous PAH detections are reflective of background conditions, the Department will likely require you to return to these areas to collect PAH samples to define the degree and extent of contamination. The proposed analyses for background PAH and groundwater samples are acceptable.

Your site is currently ranked as a "High priority" site based on risk to the public and the environment. However, current workload and staffing levels do not allow us to provide you with direct oversight at this time. This letter serves as your "Notice to Proceed" with investigation and remediation of the site. All actions must comply with all applicable Federal and State laws, Wisconsin Administrative Code chs. NR 140, NR 141, NR 700 through NR 728, and program guidance. This letter is not an approval of future work plans and/or reports. They will be filed as public records until the Department is able to review them, or until site remediation is completed.

In order to ensure compliance with applicable requirements and to make sure your project proceeds to closure in a timely fashion, your consultant should follow the Department's Guidance for Conducting Environmental Response Actions. All groundwater and soil samples must be collected and analyzed in accordance with the Department's Leaking Underground Storage Tank (LUST) and Petroleum Analytical and Quality Assurance Guidance. It is very important that your consultant understands and meets the standards established by the Department; however, per s. 144.76, Wisconsin Statutes, as the responsible party, you are ultimately responsible for the investigation and remediation that is required at your site. Failure to follow guidance may result in delays when the site is reviewed for closure.

If you are interested in obtaining the protection of limited liability under s. 144.765, Wis. Stats., please contact the Contaminated Land Recycling Program at (800) 367-6076 (instate long distance) or (608) 264-6020 (local or out of state), in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 144.765, Wis. Stats., is available to persons who meet the definition of "purchaser" in s. 144.765 (1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716, Wis. Adm. Code, site investigation at the property.

Effective the date of this letter, **every 90 days**, you or your consultant should provide the Department with a brief status report of one or two pages, providing an update on site activities and your proposed schedule. The Department must be notified **immediately** of any emergency conditions (e.g. explosive vapors in a basement, contaminated drinking water well, detection of free product), and you must implement any actions necessary to correct the emergency situation as soon as possible.

The Department will continue to review soil disposal notifications as they are submitted. Any well construction variances or WPDES permits should be obtained prior to construction, disposal or discharge. The Department will review your case for closure when the full extent of contamination has been determined and the appropriate cleanup has been completed.

As workload and staff levels are adjusted, the status of this case may be changed and we may be able to review your consultant's work for completeness and acceptability. You will be informed, in writing, if the site status is changed.

If you should have any questions, please feel free to contact our office at 715/372-4866.

Sincerely,

Christopher A. Saari
Hydrogeologist

cc: Jon Hinkel - Twin Ports Testing, Inc., 728 Garfield Ave., Duluth, MN 55802

Appendix I
Hand Auger Boring Logs
Boring Abandonment Forms

Twin Ports Testing, Inc.

Soil Boring Field Log

Client Norman & Dena Camenker

Project Hughitt Slip Site (579-95E.RA)

Boring Location 10' South of large Excavation

Weather Mild (≈35°F) windy, partly cloudy

Boring # SSB-10

TPT JOB # 579-95E.RA

Page 1 of 1

Date Start 3-11-96 Date End 3-11-96

Crew Chief RJH

Helper —

Rig → Other Tech. (Hand Auger)

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0" - 6"	PENETRATION RECORD: A 6" - 12"	PENETRATION RECORD: B 12" - 18"	PENETRATION RECORD: 18" - 24"	N-Value (A+B) SP	PID	
SSB-10		0	2.5'	2.5'		—	—		—	—	Medium to coarse grained sand - medium brown to dark brown, frozen to approx 1.6' depth, ±-1" dia gravel encountered at approx 1.7 depth, groundwater encountered at 2.2' depth
											SSB-10 collected at 12:45 pm
											hand auger boring filled w/ bentonite chips - 12:50 pm, - RJH

Surface Elevation 0.0

Cave In Level None

Remarks Frost extends to 1.6' dep.

Enviro. Test Type

WATER LEVEL OBSERVATIONS

WL1 2.2'

WL2

WL3

WL4

Water Table 2.2'

Twin Ports Testing, Inc.

Soil Boring Field Log

Client Norman and Dona Comeaker

Project Highett Slip Property

Boring Location East of the excavations

Weather Mild (~32°F) windy, partly sunny

Boring # SSB-11

TPT JOB # 579-95E

Page 1 of 1

Date Start 3-11-96 Date End 3-11-96

Crew Chief Jon Hinkel

Helper —

Rig → Other Tech. (Hand Auger Boring)

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0"-6"	A: 6"-12"	B: 12"-18"	18"-24"	N-Value (A+B) SP	PID	
SB-11		0	2	2					—	—	Medium to coarse grained black and brown sand and ±-1" dia. gravel, minor wood
↓		2	3						—	—	Brown medium grained sand, coarse grained sand, minor gravel
											SSB-11 collected at 2.3' deep at 2:00 pm
											bore hole abandoned with bentonite 2:20 pm

Surface Elevation 0.0

Cave In Level —

Remarks Frost approx 1.8' deep

Enviro. Test Type

WATER LEVEL OBSERVATIONS

WL1 2.5'

WL2

WL3

WL4

Water Table 2.5'

Twin Ports Testing, Inc.

Soil Boring Field Log

Client Norman & Dona Carmaker

Project Hughitt slip Property

Boring Location North of Excavations

Weather Mild (~32°F) partly cloudy, wind 1

Boring # SSB-12

TPT JOB # 5-79-95E.RA

Page 1 of 1

Date Start 3-11-96 Date End 3-11-96

Crew Chief RJ Hinkel

Helper —

Rig → Other Tech. Hand Auger Borings

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0" - 6"	A: 6" - 12"	B: 12" - 18"	18" - 24"	N-Value (A+B) SP	PID	
SB-12		0	2½	2	—	—	—	—	—	—	Med.-coarse grained black and brown sand, w ¼-1" dia gravel, rocks,
											SSB-12 collected at 2:45 pm; borehole abandoned w/ bentonite at 3:00 pm

Surface Elevation n.o

Cave In Level —

Remarks Frost approx 3' deep (location beneath snow)

Enviro. Test Type —

WATER LEVEL OBSERVATIONS

WL1 2' feet deep

WL2

WL3

WL4

Water Table 2' deep

Twin Ports Testing, Inc.

Soil Boring Field Log

Client Norman & Donna Carmichael

Project Hughitt Slip Property

Boring Location ft South of Excavators

Weather Mild (~32°F) cloudy, windy

Boring # SSB-13

TPT JOB # 599-95E.RA

Page 1 of 1

Date Start 3-11-96 Date End 3-11-96

Crew Chief RJ Hinkel

Helper —

Rig — Other Tech. Hand Auger Boring

Sample #	Sample Type	SAMPLE: Start Depth	SAMPLE: Sample Distance	SAMPLE: Recovery Length	PENETRATION RECORD: 0"-6"	A: 6"-12"	B: 12"-18"	18"-24"	N-Value (A+B) SP	PID	
SSB-13	B	0	2.5'	2.3	—	—	—	—	—	—	Black gravel (some coal?) ~1' diameter w minor sand down to 2' deep; beyond med. grained brown sand
											SSB-13 collected for PAH only at 3:15pm
											Borehole abandoned w/ bentonite 3:30pm

Surface Elevation 0.0

Cave In Level —

Remarks 6" of frozen ground (location beneath snow)

Enviro. Test Type —

WATER LEVEL OBSERVATIONS

WL1 2.3'

WL2

WL3

WL4

Water Table 2.3'

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5B Rev. 12-91

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

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location: SSB-10

County: Douglas

NE 1/4 of SE 1/4 of Sec. 10 ; T. 49 N; R. 14 ☐ E ☑ W

(If applicable) _____ Gov't Lot _____ Grid Number

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

Civil Town Name

Street Address of Well: N/A

City, Village: Superior, Wisconsin

(2) FACILITY NAME

Original Well Owner (If Known)

Present Well Owner: Norman & Dona Camenker

Street or Route: 70 Highgate Court

City, State, Zip Code: Superior, Wisconsin 54880

Facility Well No. and/or Name (If Applicable)

WI Unique Well No.

Reason For Abandonment: Completion of boring & sampling

Date of Abandonment: 3/11/96

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On

(Date) 3/11/96

☐ 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.) _____ Casing Diameter (ins.) _____
(From groundsurface)

Casing Depth (ft.) _____ N/A

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

(4) Depth to Water (Feet) 2.2 feet

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 N/A

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

N/A

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

(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) Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	2.5	.25	N/A

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work: Jon Hinkel • Twin Ports Testing Inc.

Signature of Person Doing Work: Jon Hinkel

Date Signed: July 18, 1996

Street or Route: 728 Garfield Ave.

Telephone Number: (218) 722-1911

City, State, Zip Code: Duluth MN 55802

(10) FOR DNR OR COUNTY USE ONLY

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

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5B Rev. 12-9

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

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location: SSB-11

County: Douglas

NE 1/4 of SE 1/4 of Sec. 10 ; T. 49 N. R. 14 ☐ E ☑ W

(If applicable) _____ Gov't Lot _____ Grid Number

Grid Location _____ ft. ☐ N. ☐ S. _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: N/A

City, Village: Superior, Wisconsin

(2) FACILITY NAME

Original Well Owner (If Known)

Present Well Owner: Norman & Donna Camenker

Street or Route: 70 Highgate Court

City, State, Zip Code: Superior, Wisconsin 54880

Facility Well No. and/or Name (If Applicable)

WI Unique Well No.

Reason For Abandonment: Completion of boring & sampling

Date of Abandonment: 3/11/96

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On

(Date) 3/11/96

☐ 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.) _____ Casing Diameter (ins.) _____
(From groundsurface)

Casing Depth (ft.) _____ N/A

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

(4) Depth to Water (Feet) 2.5 feet

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 N/A

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

N/A

(5) Required Method of Placing Sealing Material

☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Dump Bailer ☑ Other (Explain) (Gravity f

(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) Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks, Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	3	.25	N/A

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work: Jon Hinkel - Twin Ports Testing Inc.

Signature of Person Doing Work: Jon Hinkel

Date Signed: July 18 1996

Street or Route: 728 Garfield Ave.

Telephone Number: (218) 722-1911

City, State, Zip Code: Duluth

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected

District/County

Reviewer/Inspector

☐ Complying Work
☐ Noncomplying Work

Follow-up Necessary

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONME

Form 3300-5B Rev. 12

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

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location: SSB-12

County: Douglas

NE 1/4 of SE 1/4 of Sec. 10 : T. 49 N. R. 14 ☐ E ☑ W

(If applicable) _____ Gov't Lot _____ Grid Number

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

Civil Town Name

Street Address or Well: N/A

City, Village: Superior, Wisconsin

(2) FACILITY NAME

Original Well Owner (If Known)

Present Well Owner: Norman & Dona Camenker

Street or Route: 70 Highgate Court

City, State, Zip Code: Superior, Wisconsin 54880

Facility Well No. and/or Name (If Applicable) | WI Unique Well N

Reason For Abandonment: Completion of boring & sampling

Date of Abandonment: 3/11/96

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On

(Date) 3/11/96

☐ 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.) _____ Casing Diameter (ins.) _____
(From groundsurface)

Casing Depth (ft.) _____ N/A

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

(4) Depth to Water (Feet) 2.0 feet

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

If No, Explain N/A

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

N/A

(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 o
☑ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite - Cement Grout

(7) Sealing Material Used	From (Ft.)	To (Ft.)	No. Yards, Sacks Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	2.5	.25	N/A

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work: Jon Hinkel - Twin Ports Testing Inc.

Signature of Person Doing Work: Jon Hinkel | Date Signed: July 18, 1996

Street or Route: 728 Garfield Ave. | Telephone Number: (218) 722-1911

City, State, Zip Code: Duluth, MN 580

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected: | District/County:

Reviewer/Inspector: | ☐ Complying Work ☐ Noncomplying Wo

Follow-up Necessary:

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5B
Rev. 12-91

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

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location: SSB-13

County: Douglas

NE 1/4 of SE 1/4 of Sec. 10 : T. 49 N. R. 14 ☐ E ☑ W

(If applicable) _____ Gov't Lot _____ Grid Number

Grid Location _____ ft. ☐ N. ☐ S. _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: N/A

City, Village: Superior, Wisconsin

(2) FACILITY NAME

Original Well Owner (If Known)

Present Well Owner: Norman & Dona Camenker

Street or Route: 70 Highgate Court

City, State, Zip Code: Superior, Wisconsin 54880

Facility Well No. and/or Name (If Applicable)

WI Unique Well No.

Reason For Abandonment: Completion of boring & sampling

Date of Abandonment: 3/11/96

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On

(Date) 3/11/96

☐ 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.) _____ Casing Diameter (ins.) _____
(From groundsurface)

Casing Depth (ft.) _____ N/A

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

(4) Depth to Water (Feet) 2.3 feet

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: N/A

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

N/A

(5) Required Method of Placing Sealing Material

☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Dump Bailer ☑ Other (Explain) (Gravity fe

(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) Sealing Material Used	From (Ft.)	To (Ft.)	Lbs. / Sacks / Gallons Sealant or Volume (Circle One)	Mix Ratio or Mud Weight
Bentonite	Surface	2.3	.25	

(8) Comments:

(9) Name of Person or Firm Doing Sealing Work: Jon Hinkel - Twin Ports Testing Inc.

Signature of Person Doing Work: Jon Hinkel

Date Signed: July 18, 1996

Street or Route: 728 Garfield Ave.

Telephone Number: (218) 722-1911

City, State, Zip Code: Duluth, MN 55802

(10) FOR DNR OR COUNTY USE ONLY

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

Appendix J
Laboratory Reports

SERIAL NUMBER
№ 13243

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name 552-95E. MAA / HUGHITT SLIP SUPERIOR, WI No. _____ P.O.# _____

Client TWIN PORTS TESTING Report To JON HEIKEL

Address 728 GARFIELD AVE TWIN PORTS TESTING

DULUTH, MN 55802 Bill To 552-95E. MAA

Phone (218) 722-1911 Fax _____

Sampler Signature _____

Sampler (Print) MARK DARBY / MARK UDD

Remarks

RESULTS BY 8/31/95

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number of Containers	Preservative	Analyses: DRO	Pb	Lead	Cadmium	Chromium	PCBs							LSI No.
SS1 (1')	8/24/95	1:55			X	4	✓	X	X	X	X	X	X							3952
SS2 (1')	8/24/95	2:10			X	4	✓	X	X	X	X	X	X							3953
SS3 (1')	8/24/95	2:25			X	4	✓	X	X	X	X	X	X							3954

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
Mark Darby	8/24/95 3:30	[illegible] 8/24/95			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week _____ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 12/18/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13243

Project: Hughitt Slip

Project ID: 552.95E

LAB ID #	SAMPLE ID
3952-95LS	SS1 (1')
3953-95LS	SS2 (1')
3954-95LS	SS3 (1')

REVISED
12/18/95

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13243

Project: Hughitt Slip

Project ID: 552.95E

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
DRO	NA	Pass	NA	NA	NA	Pass	Pass
PVOC	NA	Pass	NA	NA	NA	Pass	Pass
PCB'S	Pass	NA	Pass	Pass	NA	NA	NA
INORGANICS	Pass	NA	Fail	Pass	NA	NA	NA

Remarks REVISED REPORT
For Chromium : Duplicate RPD = 41.4%.
For Lead : Duplicate RPD = 56.3%.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip
Project ID: 552.95E

Collected By: Mark Darby / Mark Udd
Delivered By: Mark Darby

Analysis	Date Analyzed	MDL	Chem. Lab ID	3952-95LS	3953-95LS	3954-95LS
			Sample Type	Soil	Soil	Soil
			Collected	08/24/95	08/24/95	08/24/95
			Received	08/24/95	08/24/95	08/24/95
			Reported	12/18/95	12/18/95	12/18/95
			Sample Description	SS1 (1')	SS2 (1')	SS3 (1')
MTBE	08/28/95	50.0 ug/kg		<200 ug/kg	107 ug/kg	86.2 ug/kg
Benzene	08/28/95	50.0 ug/kg		<200 ug/kg	<100 ug/kg	88.3 ug/kg
Toluene	08/28/95	50.0 ug/kg		372 ug/kg	127 ug/kg	168 ug/kg
Ethylbenzene	08/28/95	50.0 ug/kg		<200 ug/kg	<100 ug/kg	120 ug/kg
Total Xylenes	08/28/95	50.0 ug/kg		1090 ug/kg	373 ug/kg	386 ug/kg
1,3,5 Trimethylbenzene	08/28/95	50.0 ug/kg		990 ug/kg	112 ug/kg	143 ug/kg
1,2,4 Trimethylbenzene	08/28/95	50.0 ug/kg		874 ug/kg	133 ug/kg	232 ug/kg
Lead	08/31/95	5.00 mg/kg		222 mg/kg	92.9 mg/kg	46.5 mg/kg
Moisture	08/28/95	1.00 %		15.1 %	22.7 %	30.5 %
Cadmium	09/01/95	1.000 mg/kg		ND	ND	ND
Chromium	09/01/95	5.00 mg/kg		16.1 mg/kg	65.1 mg/kg	9.05 mg/kg
Diesel Range Organics	08/25/95	5.00 mg/kg		10300 mg/kg	45.1 mg/kg	456 mg/kg
PCB's, total	08/25/95	0.024 mg/kg		ND	ND	ND

Remarks

REVISED REPORT

3952-95LS Elevated detection limit due to dilution effect.

3953-95LS Elevated detection limit due to dilution effect.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

SERIAL NUMBER
№ 13282

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

561-95E. RA

Project Name Hughitt Slip Property Clean-Up No. _____ P.O.# _____

Client Mrs. Donna Camenker Report To Jon Hinkel

Address 70 Highgate Road

Superior, Wisc. Bill To 561-95E.RA

Phone 392-5457 Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R J Hinkel

Remarks One 3/3 liter soil sample collected from the SS1 location on the Hughitt Slip property in Superior, Wisconsin. Analysis by Lake Superior Laboratories

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: Lead: TCLP	LSL No.
SS1	9/12/95	2:10 pm			✓	1	None		4173

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R. J. Hinkel	9/12/95 2:30 pm	L Hanson 9/12/95			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week _____ 2-5 Day ✓ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 12/18/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

LAB ID #	SAMPLE ID
4392-95LS	SS1A
4393-95LS	SS2A
4394-95LS	SS3Aa
4395-95LS	SS3Ab
4396-95LS	SS3Ac

REVISED
12/18/95

Signature _____
Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
DRO	NA	Pass	NA	NA	NA	Pass	Pass
BTEX/PVOC	NA	Pass	NA	NA	NA	Pass	Pass
INORGANICS	Pass	NA	NA	Pass	NA	NA	NA

Remarks

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	4392-95LS	4393-95LS	4394-95LS
			Sample Type	Soil	Soil	Soil
			Collected	09/26/95	09/26/95	09/26/95
			Received	09/28/95	09/28/95	09/28/95
			Reported	12/18/95	12/18/95	12/18/95
			Sample Description	SS1A	SS2A	SS3Aa
Analysis	**Date Analyzed**	**MDL**				
MTBE	10/04/95	25.0 ug/kg		ND α	ND	<200 ug/kg
Benzene	10/04/95	5.00 ug/kg		ND α	ND	<25.0 ug/kg
Toluene	10/04/95	25.0 ug/kg		ND α	ND	765 ug/kg
Ethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	238 ug/kg
Total Xylenes	10/04/95	75.0 ug/kg		ND α	ND	251 ug/kg
1,3,5 Trimethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	1310 ug/kg
1,2,4 Trimethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	8410 ug/kg
Lead	10/11/95	10.0 mg/kg		ND	ND	254 mg/kg
Moisture	10/04/95	1.00 %		17.8 %	19.0 %	24.4 %
Diesel Range Organics	09/29/95	5.00 mg/kg		5.10 mg/kg	ND	4240 mg/kg α

Remarks

REVISED REPORT

4394-95LS Elevated detection limit due to dilution effect.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

α ⇒ Analyzed On 10/03/95

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	4395-95LS	4396-95LS	
			Sample Type	Soil	Soil	
			Collected	09/26/95	09/26/95	
			Received	09/28/95	09/28/95	
			Reported	12/18/95	12/18/95	
			Sample Description	SS3Ab	SS3Ac	
Analysis	**Date Analyzed**	**MDL**				
MTBE	10/04/95	25.0 ug/kg		89.6 ug/kg	<200 ug/kg	
Benzene	10/04/95	5.00 ug/kg		19.1 ug/kg	<10.0 ug/kg	
Toluene	10/04/95	25.0 ug/kg		219 ug/kg	<200 ug/kg	
Ethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg	
Total Xylenes	10/04/95	75.0 ug/kg		<200 ug/kg	<200 ug/kg	
1,3,5 Trimethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg	
1,2,4 Trimethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg	
Lead	10/11/95	10.0 mg/kg		257 mg/kg	160 mg/kg	
Moisture	10/04/95	1.00 %		28.2 %	27.3 %	
Diesel Range Organics	09/29/95	5.00 mg/kg		11.8 mg/kg α	8.26 mg/kg	

Remarks

REVISED REPORT

4395-95LS Elevated detection limit due to dilution effect.

4396-95LS Elevated detection limit due to dilution effect.

MDL $\Rightarrow$ Method Detection Limit
ND $\Rightarrow$ Not Detected at or above MDL

$\alpha \Rightarrow$ Analyzed On 10/03/95

SERIAL NUMBER [redacted]

№ 13367

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

TPT # 561-95E-RA

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client Norman & Donna Camenker Report To Jon Hinkel

Address _____

Bill To 561-95E-RA

Phone _____ Fax _____

Remarks

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: PVOC	Analyses: Pb	LSL No.
SS1A	9/26/95	3:50 pm			✓	3		✓	✓	✓	4392
SS2A	9/26/95	4:20 pm			✓	3		✓	✓	✓	4393
SS3Aa	9/26/95	5:00 pm			✓	3		✓	✓	✓	4394
SS3Ab	9/26/95	5:10 pm			✓	3		✓	✓	✓	4395
SS3Ac	9/26/95	5:20 pm			✓	3		✓	✓	✓	4396

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R J Hinkel	9/28/95 4:05pm	Carolyn Krueger			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hughitt Slip Property

Client: YPT

Date Received: 9-28-95

COC #: 13367

Samples Received By: CLV

Carolyn J. Vinski
(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	✓	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	✓	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	✓	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	✓	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	✓	
6.	Did the samples arrive on ice?	✓	
	a) What temperature did the samples arrive at?		
	b) Are the samples at the proper temperature?	✓	
7.	Is there enough sample to do all the analyses?	✓	
8.	Are the samples preserved correctly?	✓	
9.	Are the VOA vials head-space free?	NA	

'NO' Items Explained:

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 09/18/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13282

Project: Hughitt Slip

Project ID: 561-95E.RA

LAB ID #	SAMPLE ID
4173-95LS	SS1

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13282

Project: Hughitt Slip

Project ID: 561-95E.RA

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
INORGANICS	Pass	NA	Pass	Pass	NA	NA	NA

Remarks

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	4173-95LS		
Sample Type	Soil		
Collected	09/12/95		
Received	09/12/95		
Reported	09/18/95		
Sample Description	SS1		

Analysis	Date Analyzed	MDL			
TCLP Lead	09/18/95	0.250 mg/l	ND		

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hughitt Slip

Client: TPT-E

Date Received: 9/12/95

COC #: 13282

Samples Received By: LHanson

(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	N/A	
	a) What temperature did the samples arrive at?	N/A	
	b) Are the samples at the proper temperature?	N/A	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	N/A	

'NO' Items Explained:

SERIAL NUMBER
№ 13869

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hoghitt Slip Property No. _____ P.O.# _____

Client TPT Env. Dept. Report To Jon Hinkel

Address 728 Garfield Ave.

Duluth — Bill To 599-95E.RA

Phone — Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Remarks • Wisconsin Job
• Report PVOCs in ppb units

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: PVOC	Analyses: Lead	Analyses: PAH #8310	LSL No.
SSB-1	1/19/96	1:12 pm			✓			✓	✓	✓		1160
SSB-2	1/19/96	1:20 pm			✓			✓	✓	✓		1161
SSB-3	1/19/96	1:40 pm			✓			✓	✓	✓	✓	1162
SSB-4	1/19/96	2:05 pm			✓			NA	NA	NA		1163
SSB-5	1/19/96	2:15 pm			✓			NA	NA	NA		1164
SSB-6	1/19/96	2:45 pm			✓		HCl RJH	NA	NA	NA	NA	1165
SSB-7	1/19/96	2:55 pm			✓			✓	✓	✓		1166
SSB-8	1/19/96	3:06 pm			✓			NA	NA	NA		1167
SSB-9	1/19/96	3:20 pm			✓			NA	NA	NA	NA	1168

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R J Hinkel 1/19/96	3:55 pm	[signature] 1/19/96			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

SAMPLER

№ 13871

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. P.O.#

Client TPT Env. Dept. Report To Jon Hinkel

Address 728 Garfield Ave.

Duluth – Bill To 599-95E.RA

Phone — Fax

Sampler Signature R. J. Hinkel

Sampler (Print) R. J. Hinkel

Remarks
- Resampling of 1/19/96 event
- Wisconsin site
- Report PVOCs in ppb (Low Level detection)

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: PVOC	Analyses: Lead	Analyses: PAH # 8310	LSL No.
SSB-4	1/22/96	2:33 pm			✓	3		✓	✓	✓		1176
SSB-5	1/22/96	3:10 pm			✓	3		✓	✓	✓		1177
SSB-6	1/22/96	3:25 pm			✓	4		✓	✓	✓	✓	1178
SSB-8	1/22/96	3:37 pm			✓	3		✓	✓	✓		1179
SSB-9	1/22/96	4:00 pm			✓	4		✓	✓	✓	✓	1180

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R.J. Hinkel 1/23/96	8:24am	1/23/96			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES
A DIVISION OF TWIN PORTS TESTING, INC.
728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

Date: 02/15/96

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13869

Project: Hughitt Slip Property

Project ID: 599-95E.RA

LAB ID #	SAMPLE ID
1160-96LS	SSB-1
1161-96LS	SSB-2
1162-96LS	SSB-3
1166-96LS	SSB-7

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 998032310 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

LAKE SUPERIOR LABORATORIES
A DIVISION OF TWIN PORTS TESTING, INC.
728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

Date: 02/15/96

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: R.J. Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13871

Project: Hughitt Slip Property

Project ID: 599-95E.RA

LAB ID #	SAMPLE ID
1176-96LS	SSB-4
1177-96LS	SSB-5
1178-96LS	SSB-6
1179-96LS	SSB-8
1180-96LS	SSB-9

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 998032310 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Analysis	Date Analyzed	MDL	Chem. Lab ID: 1160-96LS	1161-96LS	1162-96LS
			Sample Type: Soil	Soil	Soil
			Collected: 01/19/96	01/19/96	01/19/96
			Received: 01/19/96	01/19/96	01/19/96
			Reported: 02/15/96	02/15/96	02/15/96
			Sample Description: SSB-1	SSB-2	SSB-3
Lead	01/26/96	5.00 mg/kg	14.6 mg/kg	ND	ND
MTBE	01/30/96	25 ug/kg	98 ug/kg	ND	ND
Benzene	01/30/96	5.0 ug/kg	27 ug/kg	ND	ND
Toluene	01/30/96	25 ug/kg	77 ug/kg	ND	ND
Ethylbenzene	01/30/96	25 ug/kg	ND	ND	ND
Xylenes, Total	01/30/96	75 ug/kg	ND	ND	ND
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg	ND	ND	ND
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg	ND	ND	ND
Moisture	01/30/96	1.00 %	23.2 %	17.6 %	19.1 %
Diesel Range Organics	02/01/96	0.100 mg/l	ND	ND	ND

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	1176-96LS	1177-96LS	1178-96LS
			Sample Type	Soil	Soil	Soil
			Collected	01/22/96	01/22/96	01/22/96
			Received	01/23/96	01/23/96	01/23/96
			Reported	02/15/96	02/15/96	02/15/96
			Sample Description	SSB-4	SSB-5	SSB-6
Analysis	Date Analyzed	MDL				
MTBE	01/30/96	25 ug/kg		ND	ND	ND
Benzene	01/30/96	5.0 ug/kg		57 ug/kg	50 ug/kg	50 ug/kg
Toluene	01/30/96	25 ug/kg		94 ug/kg	81 ug/kg	84 ug/kg
Ethylbenzene	01/30/96	25 ug/kg		50 ug/kg	52 ug/kg	53 ug/kg
Xylenes, Total	01/30/96	75 ug/kg		160 ug/kg	190 ug/kg	180 ug/kg
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg		36 ug/kg	47 ug/kg	43 ug/kg
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg		52 ug/kg	64 ug/kg	59 ug/kg
Lead	01/26/96	5.00 mg/kg		256 mg/kg	315 mg/kg	117 mg/kg
Moisture	01/30/96	1.00 %		20.9 %	35.0 %	29.9 %
Diesel Range Organics	02/02/96	5.00 mg/kg		61.5 mg/kg	29.2 mg/kg	22.3 mg/kg

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1166-96LS		
Sample Type	Soil		
Collected	01/19/96		
Received	01/19/96		
Reported	02/15/96		
Sample Description	SSB-7		

Analysis	Date Analyzed	MDL			
Lead	01/26/96	5.00 mg/kg	98.3 mg/kg		
MTBE	01/30/96	25 ug/kg	ND		
Benzene	01/30/96	5.0 ug/kg	ND		
Toluene	01/30/96	25 ug/kg	ND		
Ethylbenzene	01/30/96	25 ug/kg	ND		
Xylenes, Total	01/30/96	75 ug/kg	ND		
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg	ND		
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg	ND		
Moisture	01/30/96	1.00 %	28.9 %		
Diesel Range Organics	02/01/96	0.100 mg/l	ND		

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	1179-96LS	1180-96LS	
			Sample Type	Soil	Soil	
			Collected	01/22/96	01/22/96	
			Received	01/23/96	01/23/96	
			Reported	02/15/96	02/15/96	
			Sample Description	SSB-8	SSB-9	
Analysis	Date Analyzed	MDL				
MTBE	01/30/96	25 ug/kg		ND	ND	
Benzene	01/30/96	5.0 ug/kg		ND	ND	
Toluene	01/30/96	25 ug/kg		49 ug/kg	60 ug/kg	
Ethylbenzene	01/30/96	25 ug/kg		44 ug/kg	58 ug/kg	
Xylenes, Total	01/30/96	75 ug/kg		140 ug/kg	180 ug/kg	
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg		39 ug/kg	53 ug/kg	
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg		51 ug/kg	61 ug/kg	
Lead	01/26/96	5.00 mg/kg		115 mg/kg	321 mg/kg	
Moisture	01/30/96	1.00 %		27.2 %	53.9 %	
Diesel Range Organics	02/02/96	5.00 mg/kg		ND α	71.1 mg/kg	

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

α ⇒ Analyzed On 02/01/96

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1162-96LS		
Sample Type	Soil		
Collected	01/19/96		
Received	01/19/96		
Reported	02/15/96		
Sample Description	SSB-3		

Analysis	Date Analyzed	MDL			
Naphthalene	02/13/96	160 ug/kg	ND		
Acenaphthylene	02/13/96	240 ug/kg	ND		
Acenaphthene	02/13/96	80.0 ug/kg	ND		
Fluorene	02/13/96	80.0 ug/kg	ND		
Phenanthrene	02/13/96	12.0 ug/kg	18.6 ug/kg		
Anthracene	02/13/96	3.60 ug/kg	ND		
Fluoranthene	02/13/96	12.0 ug/kg	51.2 ug/kg		
Pyrene	02/13/96	20.0 ug/kg	60.5 ug/kg		
Benzo[a]anthracene	02/13/96	2.80 ug/kg	26.0 ug/kg		
Chrysene	02/13/96	2.80 ug/kg	36.3 ug/kg		
Benzo[b]fluoranthene	02/13/96	2.40 ug/kg	19.5 ug/kg		
Benzo[k]fluoranthene	02/13/96	2.40 ug/kg	11.6 ug/kg		
Benzo[a]pyrene	02/13/96	3.20 ug/kg	23.7 ug/kg		
Dibenzo[a,h]anthracene	02/13/96	20.0 ug/kg	<40.0 ug/kg		
Benzo[g,h,i]perylene	02/13/96	32.0 ug/kg	<64.0 ug/kg		
Indeno[1,2,3-cd]pyrene	02/13/96	8.00 ug/kg	<16.0 ug/kg		

Remarks

1162-96LS Elevated detection limit due to sample concentration.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1178-96LS	1180-96LS	
Sample Type	Soil	Soil	
Collected	01/22/96	01/22/96	
Received	01/23/96	01/23/96	
Reported	02/15/96	02/15/96	
Sample Description	SSB-6	SSB-9	

Analysis	Date Analyzed	MDL			
Naphthalene	02/14/96	160 ug/kg	ND	ND	
Acenaphthylene	02/14/96	240 ug/kg	ND	ND	
Acenaphthene	02/14/96	80.0 ug/kg	419 ug/kg	859 ug/kg	
Fluorene	02/14/96	80.0 ug/kg	ND	ND	
Phenanthrene	02/14/96	12.0 ug/kg	223 ug/kg	713 ug/kg	
Anthracene	02/14/96	3.60 ug/kg	32.4 ug/kg	80.7 ug/kg	
Fluoranthene	02/14/96	12.0 ug/kg	447 ug/kg	1120 ug/kg	
Pyrene	02/14/96	20.0 ug/kg	503 ug/kg	1290 ug/kg	
Benzo[a]anthracene	02/14/96	2.80 ug/kg	156 ug/kg	421 ug/kg	
Chrysene	02/14/96	2.80 ug/kg	235 ug/kg	618 ug/kg	
Benzo[b]fluoranthene	02/14/96	2.40 ug/kg	117 ug/kg	249 ug/kg	
Benzo[k]fluoranthene	02/14/96	2.40 ug/kg	61.4 ug/kg	146 ug/kg	
Benzo[a]pyrene	02/14/96	3.20 ug/kg	134 ug/kg	387 ug/kg	
Dibenzo[a,h]anthracene	02/14/96	20.0 ug/kg	<200 ug/kg	<400 ug/kg	
Benzo[g,h,i]perylene	02/14/96	32.0 ug/kg	<320 ug/kg	<640 ug/kg	
Indeno[1,2,3-cd]pyrene	02/14/96	8.00 ug/kg	<80.0 ug/kg	<160 ug/kg	

Remarks

WI DNR Laboratory Certification #999446800

1178-96LS Elevated detection limit due to sample concentration.

1180-96LS Elevated detection limit due to sample concentration.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hugh Hill Slip

Client: TPT-E

Date Received: 1/19/96

COC #: 13869

Samples Received By: 44

L. Hannon

(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	X	
	a) What temperature did the samples arrive at?	20	
	b) Are the samples at the proper temperature?	20	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	N/A	

'NO' Items Explained:

- LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hugh, 4 Slip Property

Client: TPT-E

Date Received: 1/23/96

COC #: 13871

Samples Received By: LH
L Hanson
(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	RO1	
	a) What temperature did the samples arrive at? 1.4C		
	b) Are the samples at the proper temperature?	RO1	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	N/A	

'NO' Items Explained:

SERIAL NUMBER
№ 14301

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client TPT Env. Dept. Report To Jon Hinkel

Address Duluth Office

Bill To 599-95E.RA

Phone — Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Remarks

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: VOC	Analyses: lead	Analyses: PAH	LSL No.
SSB-10	3-11-96	12:45 pm			✓	4		✓	✓	✓	1478
SSB-11	3-11-96	2:00 pm			✓	4		✓	✓	✓	1479
SSB-12	3-11-96	2:45 pm			✓	4		✓	✓	✓	1480
SSB-13	3-11-96	3:15 pm			✓	2				✓	1481

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R.J. Hinkel 4:00pm	3-11-96	[signature]			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day ____ or 24 Hour Rush ____ (additional charge)

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 03/26/96

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 14301

Project: Hughitt Slip Property

Project ID: 599-95E.RA

LAB ID #	SAMPLE ID
1478-96LS	SSB-10
1479-96LS	SSB-11
1480-96LS	SSB-12
1481-96LS	SSB-13

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 998032310 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
SSB-10

Chem. Lab ID: 1478-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Soil
Collected: 03/11/96
Received: 03/11/96
Analyzed: 03/11/96
Reported: 03/26/96

Analysis EPA 8021

Dichlorodifluoromethane	<25	ug/kg	1,1,2,2-Tetrachloroethane	<25	ug/kg
Chloromethane	<25	ug/kg	1,2,3-Trichloropropane	<25	ug/kg
Vinyl Chloride	<25	ug/kg	n-Propylbenzene	<25	ug/kg
Bromomethane	<25	ug/kg	Bromobenzene	<25	ug/kg
Chloroethane	<25	ug/kg	1,3,5-Trimethylbenzene	<25	ug/kg
Trichlorofluoromethane	<25	ug/kg	2-Chlorotoluene	<25	ug/kg
1,1-Dichloroethene	<25	ug/kg	4-Chlorotoluene	<25	ug/kg
Methylene Chloride	<25	ug/kg	tert-Butylbenzene	<25	ug/kg
trans-1,2-Dichloroethene	<25	ug/kg	1,2,4-Trimethylbenzene	26	ug/kg
1,1-Dichloroethane	<25	ug/kg	sec-Butylbenzene	26	ug/kg
2,2-Dichloropropane	<25	ug/kg	p-Isopropyltoluene	<25	ug/kg
cis-1,2-Dichloroethene	<25	ug/kg	1,3-Dichlorobenzene	<25	ug/kg
Chloroform	<25	ug/kg	1,4-Dichlorobenzene	<25	ug/kg
Bromochloromethane	<25	ug/kg	n-Butylbenzene	49	ug/kg
1,1,1-Trichloroethane	<25	ug/kg	1,2-Dichlorobenzene	<25	ug/kg
1,1-Dichloropropene	<25	ug/kg	1,2-Dibromo-3-chloropropane	<25	ug/kg
Carbon Tetrachloride	<25	ug/kg	1,2,4-Trichlorobenzene	<25	ug/kg
Benzene	<5.0	ug/kg	Hexachlorobutadiene	<25	ug/kg
1,2-Dichloroethane	<25	ug/kg	Naphthalene	37	ug/kg
Trichloroethene	<25	ug/kg	1,2,3-Trichlorobenzene	35	ug/kg
1,2-Dichloropropane	<25	ug/kg	Lead	216000	ug/kg
Bromodichloromethane	<25	ug/kg	Moisture	31.50	%
Dibromomethane	<25	ug/kg			
Toluene	<25	ug/kg			
1,1,2-Trichloroethane	<25	ug/kg			
1,3-Dichloropropane	<25	ug/kg			
Tetrachloroethene	<25	ug/kg			
Dibromochloromethane	<25	ug/kg			
1,2-Dibromoethane	<25	ug/kg			
Chlorobenzene	<25	ug/kg			
Ethylbenzene	<25	ug/kg			
1,1,1,2-Tetrachloroethane	<25	ug/kg			
m- & p-Xylene	<50	ug/kg			
o-Xylene	<25	ug/kg			
Styrene	<25	ug/kg			
Isopropylbenzene	<25	ug/kg			
Bromoform	<25	ug/kg			

Remarks

Lead: date analyzed 03/22/96.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
SSB-11

Chem. Lab ID: 1479-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Soil
Collected: 03/11/96
Received: 03/11/96
Analyzed: 03/11/96
Reported: 03/26/96

Analysis EPA 8021

Dichlorodifluoromethane	<25	ug/kg	1,1,2,2-Tetrachloroethane	<25	ug/kg
Chloromethane	<25	ug/kg	1,2,3-Trichloropropane	<25	ug/kg
Vinyl Chloride	<25	ug/kg	n-Propylbenzene	<25	ug/kg
Bromomethane	<25	ug/kg	Bromobenzene	<25	ug/kg
Chloroethane	<25	ug/kg	1,3,5-Trimethylbenzene	<25	ug/kg
Trichlorofluoromethane	<25	ug/kg	2-Chlorotoluene	<25	ug/kg
1,1-Dichloroethene	<25	ug/kg	4-Chlorotoluene	<25	ug/kg
Methylene Chloride	<25	ug/kg	tert-Butylbenzene	<25	ug/kg
trans-1,2-Dichloroethene	<25	ug/kg	1,2,4-Trimethylbenzene	<25	ug/kg
1,1-Dichloroethane	<25	ug/kg	sec-Butylbenzene	<25	ug/kg
2,2-Dichloropropane	<25	ug/kg	p-Isopropyltoluene	<25	ug/kg
cis-1,2-Dichloroethene	<25	ug/kg	1,3-Dichlorobenzene	<25	ug/kg
Chloroform	<25	ug/kg	1,4-Dichlorobenzene	<25	ug/kg
Bromochloromethane	<25	ug/kg	n-Butylbenzene	35	ug/kg
1,1,1-Trichloroethane	<25	ug/kg	1,2-Dichlorobenzene	<25	ug/kg
1,1-Dichloropropene	<25	ug/kg	1,2-Dibromo-3-chloropropane	<25	ug/kg
Carbon Tetrachloride	<25	ug/kg	1,2,4-Trichlorobenzene	40	ug/kg
Benzene	<5.0	ug/kg	Hexachlorobutadiene	<25	ug/kg
1,2-Dichloroethane	<25	ug/kg	Naphthalene	<25	ug/kg
Trichloroethene	<25	ug/kg	1,2,3-Trichlorobenzene	<25	ug/kg
1,2-Dichloropropane	<25	ug/kg	Lead	<5000	ug/kg
Bromodichloromethane	<25	ug/kg	Moisture	19.80	%
Dibromomethane	<25	ug/kg			
Toluene	<25	ug/kg			
1,1,2-Trichloroethane	<25	ug/kg			
1,3-Dichloropropane	<25	ug/kg			
Tetrachloroethene	<25	ug/kg			
Dibromochloromethane	<25	ug/kg			
1,2-Dibromoethane	<25	ug/kg			
Chlorobenzene	<25	ug/kg			
Ethylbenzene	<25	ug/kg			
1,1,1,2-Tetrachloroethane	<25	ug/kg			
m- & p-Xylene	<50	ug/kg			
o-Xylene	<25	ug/kg			
Styrene	<25	ug/kg			
Isopropylbenzene	<25	ug/kg			
Bromoform	<25	ug/kg			

Remarks

Lead: date analyzed 03/22/96.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
SSB-12

Chem. Lab ID: 1480-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Soil
Collected: 03/11/96
Received: 03/11/96
Analyzed: 03/11/96
Reported: 03/26/96

Analysis EPA 8021

Dichlorodifluoromethane	<25	ug/kg	1,1,2,2-Tetrachloroethane	<25	ug/kg
Chloromethane	<25	ug/kg	1,2,3-Trichloropropane	<25	ug/kg
Vinyl Chloride	<25	ug/kg	n-Propylbenzene	<25	ug/kg
Bromomethane	<25	ug/kg	Bromobenzene	<25	ug/kg
Chloroethane	<25	ug/kg	1,3,5-Trimethylbenzene	<25	ug/kg
Trichlorofluoromethane	<25	ug/kg	2-Chlorotoluene	<25	ug/kg
1,1-Dichloroethene	<25	ug/kg	4-Chlorotoluene	<25	ug/kg
Methylene Chloride	<25	ug/kg	tert-Butylbenzene	<25	ug/kg
trans-1,2-Dichloroethene	<25	ug/kg	1,2,4-Trimethylbenzene	<25	ug/kg
1,1-Dichloroethane	<25	ug/kg	sec-Butylbenzene	<25	ug/kg
2,2-Dichloropropane	<25	ug/kg	p-Isopropyltoluene	<25	ug/kg
cis-1,2-Dichloroethene	<25	ug/kg	1,3-Dichlorobenzene	<25	ug/kg
Chloroform	<25	ug/kg	1,4-Dichlorobenzene	<25	ug/kg
Bromochloromethane	<25	ug/kg	n-Butylbenzene	42	ug/kg
1,1,1-Trichloroethane	<25	ug/kg	1,2-Dichlorobenzene	<25	ug/kg
1,1-Dichloropropene	<25	ug/kg	1,2-Dibromo-3-chloropropane	<25	ug/kg
Carbon Tetrachloride	<25	ug/kg	1,2,4-Trichlorobenzene	48	ug/kg
Benzene	<5.0	ug/kg	Hexachlorobutadiene	<25	ug/kg
1,2-Dichloroethane	<25	ug/kg	Naphthalene	26	ug/kg
Trichloroethene	<25	ug/kg	1,2,3-Trichlorobenzene	27	ug/kg
1,2-Dichloropropane	<25	ug/kg	Lead	78500	ug/kg
Bromodichloromethane	<25	ug/kg	Moisture	28.10	%
Dibromomethane	<25	ug/kg			
Toluene	<25	ug/kg			
1,1,2-Trichloroethane	<25	ug/kg			
1,3-Dichloropropane	<25	ug/kg			
Tetrachloroethene	<25	ug/kg			
Dibromochloromethane	<25	ug/kg			
1,2-Dibromoethane	<25	ug/kg			
Chlorobenzene	<25	ug/kg			
Ethylbenzene	<25	ug/kg			
1,1,1,2-Tetrachloroethane	<25	ug/kg			
m- & p-Xylene	<50	ug/kg			
o-Xylene	<25	ug/kg			
Styrene	<25	ug/kg			
Isopropylbenzene	<25	ug/kg			
Bromoform	<25	ug/kg			

Remarks

Lead: date analyzed 03/22/96.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID		1478-96LS	1479-96LS	1480-96LS
Sample Type		Soil	Soil	Soil
Collected		03/11/96	03/11/96	03/11/96
Received		03/11/96	03/11/96	03/11/96
Reported		03/26/96	03/26/96	03/26/96
Sample Description		SSB-10	SSB-11	SSB-12
Analysis	**Date Analyzed**	**RL**		
Acenaphthene	03/19/96	5.70 ug/kg	ND	ND	ND
Acenaphthylene	03/19/96	1.20 ug/kg	ND	ND	ND
Anthracene	03/19/96	9.00 ug/kg	473 ug/kg	ND	93.0 ug/kg
Benzo[a]anthracene	03/19/96	4.00 ug/kg	708 ug/kg	ND	392 ug/kg
Benzo[a]pyrene	03/19/96	4.00 ug/kg	892 ug/kg	8.87 ug/kg	610 ug/kg
Benzo[b]fluoranthene	03/19/96	2.20 ug/kg	734 ug/kg	7.35 ug/kg	476 ug/kg
Benzo[k]fluoranthene	03/19/96	1.70 ug/kg	270 ug/kg	3.47 ug/kg	172 ug/kg
Benzo[g,h,i]perylene	03/19/96	4.50 ug/kg	ND	ND	302 ug/kg
Chrysene	03/19/96	1.70 ug/kg	ND	ND	508 ug/kg
Dibenzo[a,h]anthracene	03/19/96	6.20 ug/kg	ND	ND	ND
Fluoranthene	03/19/96	6.20 ug/kg	2250 ug/kg	25.3 ug/kg	1530 ug/kg
Fluorene	03/19/96	3.40 ug/kg	255 ug/kg	ND	ND
Indeno[1,2,3-cd]pyrene	03/19/96	6.70 ug/kg	501 ug/kg	ND	353 ug/kg
1-Methyl Naphthalene	03/19/96	1.20 ug/kg	191 ug/kg	9.50 ug/kg	ND
2-Methyl Naphthalene	03/19/96	3.40 ug/kg	ND	ND	ND
Naphthalene	03/19/96	1.70 ug/kg	401 ug/kg	5.17 ug/kg	60.9 ug/kg
Phenanthrene	03/19/96	6.70 ug/kg	1890 ug/kg	28.5 ug/kg	275 ug/kg
Pyrene	03/19/96	5.00 ug/kg	2400 ug/kg	ND	964 ug/kg

Remarks

RL ⇒ Reporting Limit
ND ⇒ Not Detected at or above RL

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1481-96LS		
Sample Type	Soil		
Collected	03/11/96		
Received	03/11/96		
Reported	03/26/96		
Sample Description	SSB-13		

Analysis	Date Analyzed	RL			
Acenaphthene	03/19/96	5.70 ug/kg	ND		
Acenaphthylene	03/19/96	1.20 ug/kg	ND		
Anthracene	03/19/96	9.00 ug/kg	ND		
Benzo[a]anthracene	03/19/96	4.00 ug/kg	8.29 ug/kg		
Benzo[a]pyrene	03/19/96	4.00 ug/kg	16.3 ug/kg		
Benzo[b]fluoranthene	03/19/96	2.20 ug/kg	14.5 ug/kg		
Benzo[k]fluoranthene	03/19/96	1.70 ug/kg	6.96 ug/kg		
Benzo[g,h,i]perylene	03/19/96	4.50 ug/kg	4.29 ug/kg		
Chrysene	03/19/96	1.70 ug/kg	ND		
Dibenzo[a,h]anthracene	03/19/96	6.20 ug/kg	ND		
Fluoranthene	03/19/96	6.20 ug/kg	46.7 ug/kg		
Fluorene	03/19/96	3.40 ug/kg	ND		
Indeno[1,2,3-cd]pyrene	03/19/96	6.70 ug/kg	7.10 ug/kg		
1-Methyl Naphthalene	03/19/96	1.20 ug/kg	16.3 ug/kg		
2-Methyl Naphthalene	03/19/96	3.40 ug/kg	ND		
Naphthalene	03/19/96	1.70 ug/kg	9.50 ug/kg		
Phenanthrene	03/19/96	6.70 ug/kg	40.6 ug/kg		
Pyrene	03/19/96	5.00 ug/kg	ND		

Remarks

RL ⇒ Reporting Limit
ND ⇒ Not Detected at or above RL

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Highlift Slip

Client: TPT-E

Date Received: 3/11/96

COC #: 14301

Samples Received By: H

L.H. Johnson
(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	ROI	
	a) What temperature did the samples arrive at?	ROI	
	b) Are the samples at the proper temperature?	ROI	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	N/A	

'NO' Items Explained:

SERIAL NUMBER
№ 13866

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hoghtt Slip Property No. _____ P.O.# _____

Client TPT Env. Dept Report To Jon Hinkel

Address 728 Garfield Ave

Duluth — Bill To 599-95E.RA

Phone — Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Remarks Please report in detection limits as follows:
100 ppm — GRO; DRO
3 ppm - BTEX parameters
1 ppm - lead

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: GRO	Analyses: DRO	Analyses: BTEX	Analyses: Lead	LSL No.
WS-1	1/17/96	4:35 pm		✓		5		✓	✓	✓	✓	1169

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R J Hinkel	1/19/96 9:25am	[illegible]			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week _____ 2-5 Day ✓ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES
728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295
A DIVISION OF TWIN PORTS TESTING, INC.

Date: 01/30/96

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13866

Project: Hughitt Slip Property

Project ID: 599-95E.RA

LAB ID #	SAMPLE ID
1169-96LS	WS-1

Signature Timothy C. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 998032310 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Analysis	Date Analyzed	MDL	Chem. Lab ID: 1169-96LS		
			Sample Type: Water		
			Collected: 01/17/96 Received: 01/19/96 Reported: 01/30/96		
			Sample Description: WS-1		
Diesel Range Organics	01/24/96	0.100 mg/l	0.492 mg/l		
Gasoline Range Organics	01/30/96	0.100 mg/l	ND		
Benzene	01/30/96	0.005 mg/l	ND		
Toluene	01/30/96	0.005 mg/l	ND		
Ethylbenzene	01/30/96	0.005 mg/l	ND		
Xylenes, Total	01/30/96	0.015 mg/l	ND		
Lead	01/20/96	0.400 mg/l	ND		

Remarks

DRO: Duplicate diesel component spike recovery = 119.3%. Method blank recovery = 0.135mg/l.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LAKE SUPERIOR LABORATORIES

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hugh Slip

Client: TPTE

Date Received: 11/19/96

COC #: 13866

Samples Received By: [signature]

(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	X	
	a) What temperature did the samples arrive at? 2.1 C		
	b) Are the samples at the proper temperature?	X	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	X	

'NO' Items Explained:

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

SERIAL NUMBER

№ 14018

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client Twin Ports Testing Report To Jon Hinkel

Address _____

Bill To 579-95E.RA

Phone _____ Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R J Hinkel

Remarks

Wisconsin Job; low level detection required.

Note: VOC vial marked "X" experienced spillage in the field.

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: VOC	Analyses: PAH (8310)	Analyses: Lead	LSL No.
WS-2	5/30/96	3:45 pm		✓		6		✓	✓	✓	✓	2161
Field Blank	5/30/96	3:45 pm		✓		3			✓			2162
Trip Blank	—	—		✓		1			✓			2163

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R. J. Hinkel	5-31-96 8:15	5/31/96			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 06/24/96

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 14018

Project: Hughitt Slip Property

Project ID: 599-95E.RA

LAB ID #	SAMPLE ID
2161-96LS	WS-2
2162-96LS	Field Blank
2163-96LS	Trip Blank

Signature _____

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 998032310

Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
WS-2

Chem. Lab ID: 2161-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Water
Collected: 05/30/96
Received: 05/31/96
Analyzed: 06/06/96
Reported: 06/24/96

Analysis EPA 8021

Dichlorodifluoromethane	<1.0	ug/l	1.1.2.2-Tetrachloroethane	<1.0	ug/l
Chloromethane	<1.0	ug/l	1.2.3-Trichloropropane	<1.0	ug/l
Vinyl Chloride	<1.0	ug/l	n-Propylbenzene	<1.0	ug/l
Bromomethane	<1.0	ug/l	Bromobenzene	<1.0	ug/l
Chloroethane	<1.0	ug/l	1.3.5-Trimethylbenzene	<1.0	ug/l
Trichlorofluoromethane	<1.0	ug/l	2-Chlorotoluene	<1.0	ug/l
1.1-Dichloroethene	<1.0	ug/l	4-Chlorotoluene	<1.0	ug/l
Methylene Chloride	<1.0	ug/l	tert-Butylbenzene	<1.0	ug/l
trans-1.2-Dichloroethene	<1.0	ug/l	1.2.4-Trimethylbenzene	<1.0	ug/l
1.1-Dichloroethane	<1.0	ug/l	sec-Butylbenzene	<1.0	ug/l
2.2-Dichloropropane	<1.0	ug/l	p-Isopropyltoluene	<1.0	ug/l
cis-1.2-Dichloroethene	<1.0	ug/l	1.3-Dichlorobenzene	<1.0	ug/l
Chloroform	<1.0	ug/l	1.4-Dichlorobenzene	<1.0	ug/l
Bromochloromethane	<1.0	ug/l	n-Butylbenzene	1.4	ug/l
1.1.1-Trichloroethane	<1.0	ug/l	1.2-Dichlorobenzene	<1.0	ug/l
1.1-Dichloropropene	<1.0	ug/l	1.2-Dibromo-3-chloropropane	<1.0	ug/l
Carbon Tetrachloride	<1.0	ug/l	1.2.4-Trichlorobenzene	<1.0	ug/l
Benzene	<1.0	ug/l	Hexachlorobutadiene	<1.0	ug/l
1.2-Dichloroethane	<1.0	ug/l	Naphthalene	3.0	ug/l
Trichloroethene	<1.0	ug/l	1.2.3-Trichlorobenzene	<1.0	ug/l
1.2-Dichloropropane	<1.0	ug/l	Diesel Range Organics	113	ug/l
Bromodichloromethane	<1.0	ug/l	Lead	11.1	ug/l
Dibromomethane	<1.0	ug/l			
Toluene	<1.0	ug/l			
1.1.2-Trichloroethane	<1.0	ug/l			
1.3-Dichloropropane	<1.0	ug/l			
Tetrachloroethene	<1.0	ug/l			
Dibromochloromethane	<1.0	ug/l			
1.2-Dibromoethane	<1.0	ug/l			
Chlorobenzene	<1.0	ug/l			
Ethylbenzene	<1.0	ug/l			
1.1.1.2-Tetrachloroethane	<1.0	ug/l			
m- & p-Xylene	<2.0	ug/l			
o-Xylene	<1.0	ug/l			
Styrene	<1.0	ug/l			
Isopropylbenzene	<1.0	ug/l			
Bromoform	<1.0	ug/l			

Remarks

DRO: date analyzed 06/13/96.

Lead: date analyzed 06/24/96. Method blank contained 7.56ug/l Pb. Spike recovery = 120.7%.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

	Chem. Lab ID	2161-96LS	
	Sample Type	Water	
	Collected	05/30/96	
	Received	05/31/96	
	Reported	06/24/96	
	Sample Description	WS-2	
Analysis	**Date Analyzed**	**RL**	
Acenaphthene	06/06/96	0.20 ug/l	ND
Acenaphthylene	06/06/96	0.040 ug/l	ND
Anthracene	06/06/96	0.32 ug/l	ND
Benzo(a)anthracene	06/06/96	0.14 ug/l	ND
Benzo(a)pyrene	06/06/96	0.14 ug/l	ND
Benzo(b)fluoranthene	06/06/96	0.080 ug/l	ND
Benzo(k)fluoranthene	06/06/96	0.060 ug/l	ND
Benzo(g,h.i)perylene	06/06/96	0.16 ug/l	ND
Chrysene	06/06/96	0.060 ug/l	ND
Dibenzo(a.h)anthracene	06/06/96	0.22 ug/l	ND
Fluoranthene	06/06/96	0.22 ug/l	ND
Fluorene	06/06/96	0.12 ug/l	ND
Indeno(1,2,3.c,d)pyrene	06/06/96	0.24 ug/l	ND
1-Methyl Naphthalene	06/06/96	0.040 ug/l	ND
2-Methyl Naphthalene	06/06/96	0.12 ug/l	ND
Naphthalene	06/06/96	0.060 ug/l	ND
Phenanthrene	06/06/96	0.24 ug/l	ND
Pyrene	06/06/96	0.18 ug/l	ND

Remarks

RL ⇒ Reporting Limit
ND ⇒ Not Detected at or above RL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
Field Blank

Chem. Lab ID: 2162-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Water
Collected: 05/30/96
Received: 05/31/96
Analyzed: 06/06/96
Reported: 06/24/96

Analysis EPA 8021

Dichlorodifluoromethane	<1.0	ug/l	1.1.2.2-Tetrachloroethane	<1.0	ug/l
Chloromethane	<1.0	ug/l	1.2.3-Trichloropropane	<1.0	ug/l
Vinyl Chloride	<1.0	ug/l	n-Propylbenzene	<1.0	ug/l
Bromomethane	<1.0	ug/l	Bromobenzene	<1.0	ug/l
Chloroethane	<1.0	ug/l	1.3.5-Trimethylbenzene	<1.0	ug/l
Trichlorofluoromethane	<1.0	ug/l	2-Chlorotoluene	<1.0	ug/l
1.1-Dichloroethene	<1.0	ug/l	4-Chlorotoluene	<1.0	ug/l
Methylene Chloride	<1.0	ug/l	tert-Butylbenzene	<1.0	ug/l
trans-1.2-Dichloroethene	<1.0	ug/l	1.2.4-Trimethylbenzene	<1.0	ug/l
1.1-Dichloroethane	<1.0	ug/l	sec-Butylbenzene	<1.0	ug/l
2.2-Dichloropropane	<1.0	ug/l	p-Isopropyltoluene	<1.0	ug/l
cis-1.2-Dichloroethene	<1.0	ug/l	1.3-Dichlorobenzene	<1.0	ug/l
Chloroform	<1.0	ug/l	1.4-Dichlorobenzene	<1.0	ug/l
Bromochloromethane	<1.0	ug/l	n-Butylbenzene	<1.0	ug/l
1.1.1-Trichloroethane	<1.0	ug/l	1.2-Dichlorobenzene	<1.0	ug/l
1.1-Dichloropropene	<1.0	ug/l	1.2-Dibromo-3-chloropropane	<1.0	ug/l
Carbon Tetrachloride	<1.0	ug/l	1.2.4-Trichlorobenzene	<1.0	ug/l
Benzene	<1.0	ug/l	Hexachlorobutadiene	<1.0	ug/l
1.2-Dichloroethane	<1.0	ug/l	Naphthalene	<1.0	ug/l
Trichloroethene	<1.0	ug/l	1.2.3-Trichlorobenzene	<1.0	ug/l
1.2-Dichloropropane	<1.0	ug/l	Diesel Range Organics	-	
Bromodichloromethane	<1.0	ug/l	Lead	-	
Dibromomethane	<1.0	ug/l			
Toluene	2.1	ug/l			
1.1.2-Trichloroethane	<1.0	ug/l			
1.3-Dichloropropane	<1.0	ug/l			
Tetrachloroethene	<1.0	ug/l			
Dibromochloromethane	<1.0	ug/l			
1.2-Dibromoethane	<1.0	ug/l			
Chlorobenzene	<1.0	ug/l			
Ethylbenzene	<1.0	ug/l			
1.1.1.2-Tetrachloroethane	<1.0	ug/l			
m- & p-Xylene	<2.0	ug/l			
o-Xylene	<1.0	ug/l			
Styrene	<1.0	ug/l			
Isopropylbenzene	<1.0	ug/l			
Bromoform	<1.0	ug/l			

Remarks

DRO: date analyzed 06/13/96.

Lead: date analyzed 06/24/96. Method blank contained 7.56ug/l Pb. Spike recovery = 120.7%.

- Not Tested For

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Sample Description
Trip Blank

Chem. Lab ID: 2163-96LS
Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel
Sample Type: Water
Collected: 05/30/96
Received: 05/31/96
Analyzed: 06/06/96
Reported: 06/24/96

Analysis EPA 8021

Dichlorodifluoromethane	<1.0	ug/l	1,1,2,2-Tetrachloroethane	<1.0	ug/l
Chloromethane	<1.0	ug/l	1,2,3-Trichloropropane	<1.0	ug/l
Vinyl Chloride	<1.0	ug/l	n-Propylbenzene	<1.0	ug/l
Bromomethane	<1.0	ug/l	Bromobenzene	<1.0	ug/l
Chloroethane	<1.0	ug/l	1,3,5-Trimethylbenzene	<1.0	ug/l
Trichlorofluoromethane	<1.0	ug/l	2-Chlorotoluene	<1.0	ug/l
1,1-Dichloroethene	<1.0	ug/l	4-Chlorotoluene	<1.0	ug/l
Methylene Chloride	<1.0	ug/l	tert-Butylbenzene	<1.0	ug/l
trans-1,2-Dichloroethene	<1.0	ug/l	1,2,4-Trimethylbenzene	<1.0	ug/l
1,1-Dichloroethane	<1.0	ug/l	sec-Butylbenzene	<1.0	ug/l
2,2-Dichloropropane	<1.0	ug/l	p-Isopropyltoluene	<1.0	ug/l
cis-1,2-Dichloroethene	<1.0	ug/l	1,3-Dichlorobenzene	<1.0	ug/l
Chloroform	<1.0	ug/l	1,4-Dichlorobenzene	<1.0	ug/l
Bromochloromethane	<1.0	ug/l	n-Butylbenzene	<1.0	ug/l
1,1,1-Trichloroethane	<1.0	ug/l	1,2-Dichlorobenzene	<1.0	ug/l
1,1-Dichloropropene	<1.0	ug/l	1,2-Dibromo-3-chloropropane	<1.0	ug/l
Carbon Tetrachloride	<1.0	ug/l	1,2,4-Trichlorobenzene	<1.0	ug/l
Benzene	<1.0	ug/l	Hexachlorobutadiene	<1.0	ug/l
1,2-Dichloroethane	<1.0	ug/l	Naphthalene	<1.0	ug/l
Trichloroethene	<1.0	ug/l	1,2,3-Trichlorobenzene	<1.0	ug/l
1,2-Dichloropropane	<1.0	ug/l	Diesel Range Organics	-	
Bromodichloromethane	<1.0	ug/l	Lead	-	
Dibromomethane	<1.0	ug/l			
Toluene	<1.0	ug/l			
1,1,2-Trichloroethane	<1.0	ug/l			
1,3-Dichloropropane	<1.0	ug/l			
Tetrachloroethene	<1.0	ug/l			
Dibromochloromethane	<1.0	ug/l			
1,2-Dibromoethane	<1.0	ug/l			
Chlorobenzene	<1.0	ug/l			
Ethylbenzene	<1.0	ug/l			
1,1,1,2-Tetrachloroethane	<1.0	ug/l			
m- & p-Xylene	<2.0	ug/l			
o-Xylene	<1.0	ug/l			
Styrene	<1.0	ug/l			
Isopropylbenzene	<1.0	ug/l			
Bromoform	<1.0	ug/l			

Remarks

DRO: date analyzed 06/13/96.

Lead: date analyzed 06/24/96. Method blank contained 7.56ug/l Pb. Spike recovery = 120.7%.

- Not Tested For

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hughitt Slip Property

Client: TPT-E

Date Received: 5/31/96

COC #: 14018

Samples Received By: 4

LdLarson
(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	X	
	a) What temperature did the samples arrive at? 20.1		
	b) Are the samples at the proper temperature?	20.1	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	X	

'NO' Items Explained:

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, District Director

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
TELEFAX 715-372-4836

February 23, 1996

FILE COPY

MR & MRS NORMAN CAMENKER
70 HIGHGATE COURT
SUPERIOR WI 54880

Re: Petroleum Contamination at the Hughitt Slip Property (NWD ERP Case #16-00170)

Dear Mr. and Mrs. Camenker:

The Department has received the proposal for further soil and groundwater sampling at the above named site, prepared by Twin Ports Testing, Inc. (TPT), and dated February 20, 1996. After reviewing the proposal, the Department feels that the soil sampling protocol should be modified to include full Volatile Organic Compound (VOC), Polynuclear Aromatic Hydrocarbon (PAH) and lead (Pb) analyses at each of the three locations intended to define the degree and extent of contamination. The full VOC sampling is necessary due to the unknown nature of the contaminants. The Department is suggesting the collection of the PAH samples because, if TPT fails to demonstrate that previous PAH detections are reflective of background conditions, the Department will likely require you to return to these areas to collect PAH samples to define the degree and extent of contamination. The proposed analyses for background PAH and groundwater samples are acceptable.

Your site is currently ranked as a "High priority" site based on risk to the public and the environment. However, current workload and staffing levels do not allow us to provide you with direct oversight at this time. This letter serves as your **"Notice to Proceed"** with investigation and remediation of the site. All actions must comply with all applicable Federal and State laws, Wisconsin Administrative Code chs. NR 140, NR 141, NR 700 through NR 728, and program guidance. This letter is not an approval of future work plans and/or reports. They will be filed as public records until the Department is able to review them, or until site remediation is completed.

In order to ensure compliance with applicable requirements and to make sure your project proceeds to closure in a timely fashion, your consultant should follow the Department's Guidance for Conducting Environmental Response Actions. All groundwater and soil samples must be collected and analyzed in accordance with the Department's Leaking Underground Storage Tank (LUST) and Petroleum Analytical and Quality Assurance Guidance. It is very important that your consultant understands and meets the standards established by the Department; however, per s. 144.76, Wisconsin Statutes, as the responsible party, you are ultimately responsible for the investigation and remediation that is required at your site. Failure to follow guidance may result in delays when the site is reviewed for closure.

If you are interested in obtaining the protection of limited liability under s. 144.765, Wis. Stats., please contact the Contaminated Land Recycling Program at (800) 367-6076 (instate long distance) or (608) 264-6020 (local or out of state), in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 144.765, Wis. Stats., is available to persons who meet the definition of "purchaser" in s. 144.765 (1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716, Wis. Adm. Code, site investigation at the property.

Effective the date of this letter, **every 90 days**, you or your consultant should provide the Department with a brief status report of one or two pages, providing an update on site activities and your proposed schedule. The Department must be notified **immediately** of any emergency conditions (e.g. explosive vapors in a basement, contaminated drinking water well, detection of free product), and you must implement any actions necessary to correct the emergency situation as soon as possible.

The Department will continue to review soil disposal notifications as they are submitted. Any well construction variances or WPDES permits should be obtained prior to construction, disposal or discharge. The Department will review your case for closure when the full extent of contamination has been determined and the appropriate cleanup has been completed.

As workload and staff levels are adjusted, the status of this case may be changed and we may be able to review your consultant's work for completeness and acceptability. You will be informed, in writing, if the site status is changed.

If you should have any questions, please feel free to contact our office at 715/372-4866.

Sincerely,

Christopher A. Saari
Hydrogeologist

cc: Jon Hinkel - Twin Ports Testing, Inc., 728 Garfield Ave., Duluth, MN 55802

SINCE 1972
TWIN PORTS TESTING INC.
1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
(715) 392-7114 • FAX (715) 392-7163
728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
(218) 722-1911 • FAX (218) 722-3295
8 INDUSTRIAL PARK ROAD • NEGAUNEE, MICHIGAN 49866
(906) 226-6653 • FAX (906) 226-3699

Telecopier Transmittal Cover Sheet

Number of pages to be transmitted: (9)
Date: February 20th 1996

Please Deliver the Following Pages To:

Name: Chris Saari
Company: Wisconsin DNR
Telecopier Number: 715-372-4836

TPT project number:
TPT faxsimille number: (218) 722-3295
TPT phone number: (218) 722 1911

This Telecopy is being sent by:

Remarks:

Dear Chris,

Thank you for your input during our meeting yesterday afternoon concerning the Hughitt Slip site in Superior, Wisconsin. In response to your comments, we are proposing the following program of soil sample collection and analyses be performed. All soil samples would be collected from the water table using a hand auger:

- One sample collected northwest of the present excavations to be analyzed for lead;
- One sample collected east of the excavations to be analyzed for PVOCs and lead;
- One sample collected southwest of the excavations to be analyzed for PVOCs;

- One sample collected at least 30 feet south of the excavations, to be analyzed for PAHs.

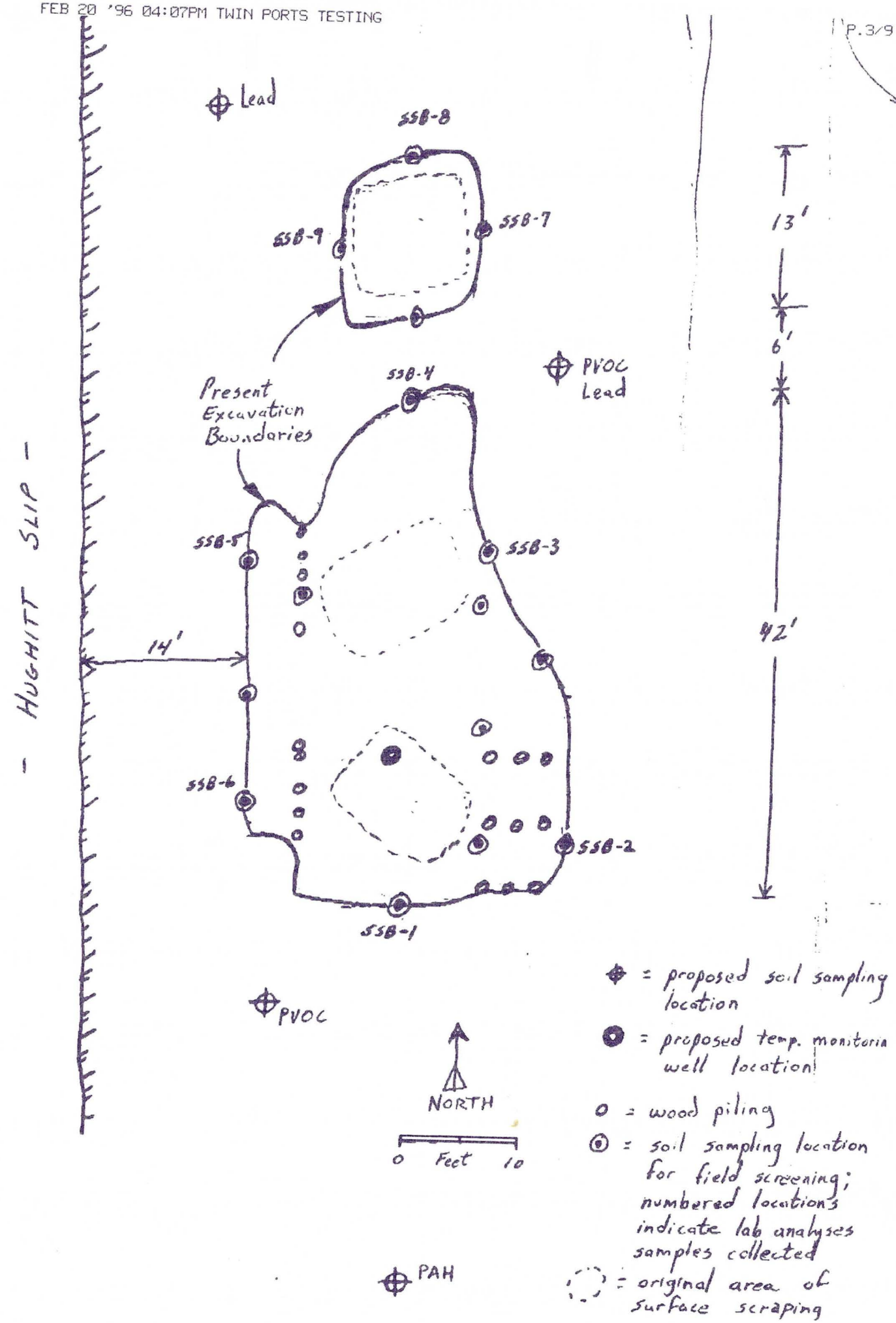
The soil sample collection site locations have been chosen in an effort to reasonably define the extent of PVOC compounds and lead present in the site's soils, and to strengthen evidence of PAH background contamination. In consideration of the closeness of the site to the edge of the Hughitt Slip (14 feet), we believe that the edge of slip serves adequately to define the western limits of any PVOC or lead soil concentrations extending west of the excavation.

In addition to soil sample collection and analysis, we plan to install one temporary groundwater monitoring well upon backfilling of the excavations. The temporary well would be developed as fully as possible and sampled for VOCs, PAHs and lead.

I will be contacting you by phone within a day or so. I look forward to hearing your comments.

Thank you,

Jon Hinkel


Lead
SSB-8
SSB-9
SSB-7
13'
6'
42'
Present Excavation Boundaries
PVOC Lead
SSB-4
SSB-5
SSB-3
14'
SSB-6
SSB-2
SSB-1
- HUGHITT SLIP -
PVOC
NORTH
0 Feet 10
PAH
= proposed soil sampling location
= proposed temp. monitoring well location
= wood piling
= soil sampling location for field screening; numbered locations indicate lab analyses samples collected
= original area of surface scraping

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	1160-96LS	1161-96LS	1162-96LS
			Sample Type	Soil	Soil	Soil
			Collected	01/19/96	01/19/96	01/19/96
			Received	01/19/96	01/19/96	01/19/96
			Reported	02/15/96	02/15/96	02/15/96
			Sample Description	SSB-1	SSB-2	SSB-3
Analysis	**Date Analyzed**	**MDL**				
Lead	01/26/96	5.00 mg/kg		14.6 mg/kg	ND	ND
MTBE	01/30/96	25 ug/kg		98 ug/kg	ND	ND
Benzene	01/30/96	5.0 ug/kg		27 ug/kg	ND	ND
Toluene	01/30/96	25 ug/kg		77 ug/kg	ND	ND
Ethylbenzene	01/30/96	25 ug/kg		ND	ND	ND
Xylenes, Total	01/30/96	75 ug/kg		ND	ND	ND
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg		ND	ND	ND
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg		ND	ND	ND
Moisture	01/30/96	1.00 %		23.2 %	17.6 %	19.1 %
Diesel Range Organics	02/01/96	0.100 mg/l		ND	ND	ND

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

		Chem. Lab ID	1166-96LS		
		Sample Type	Soil		
		Collected	01/19/96		
		Received	01/19/96		
		Reported	02/15/96		
		Sample Description	SSB-7		
Analysis	**Date Analyzed**	**MDL**			
Lead	01/26/96	5.00 mg/kg	98.3 mg/kg		
MTBE	01/30/96	25 ug/kg	ND		
Benzene	01/30/96	5.0 ug/kg	ND		
Toluene	01/30/96	25 ug/kg	ND		
Ethylbenzene	01/30/96	25 ug/kg	ND		
Xylenes, Total	01/30/96	75 ug/kg	ND		
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg	ND		
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg	ND		
Moisture	01/30/96	1.00 %	28.9 %		
Diesel Range Organics	02/01/96	0.100 mg/l	ND		

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LAKE SUPERIOR LABORATORIES

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	1162-96LS		
Sample Type	Soil		
Collected	01/19/96		
Received	01/19/96		
Reported	02/15/96		
Sample Description	SSB-3		

Analysis	Date Analyzed	MDL			
Naphthalene	02/13/96	160 ug/kg	ND		
Acenaphthylene	02/13/96	240 ug/kg	ND		
Acenaphthene	02/13/96	80.0 ug/kg	ND		
Fluorene	02/13/96	80.0 ug/kg	ND		
Phenanthrene	02/13/96	12.0 ug/kg	18.6 ug/kg		
Anthracene	02/13/96	3.60 ug/kg	ND		
Fluoranthene	02/13/96	12.0 ug/kg	51.2 ug/kg		
Pyrene	02/13/96	20.0 ug/kg	60.5 ug/kg		
Benzo[a]anthracene	02/13/96	2.80 ug/kg	26.0 ug/kg		
Chrysene	02/13/96	2.80 ug/kg	36.3 ug/kg		
Benzo[b]fluoranthene	02/13/96	2.40 ug/kg	19.5 ug/kg		
Benzo[k]fluoranthene	02/13/96	2.40 ug/kg	11.6 ug/kg		
Benzo[a]pyrene	02/13/96	3.20 ug/kg	23.7 ug/kg		
Dibenzo[a,h]anthracene	02/13/96	20.0 ug/kg	<40.0 ug/kg		
Benzo[g,h,i]perylene	02/13/96	32.0 ug/kg	<64.0 ug/kg		
Indeno[1,2,3-cd]pyrene	02/13/96	8.00 ug/kg	<16.0 ug/kg		

Remarks

1162-96LS Elevated detection limit due to sample concentration.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LAKE SUPERIOR LABORATORIES

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	1176-96LS	1177-96LS	1178-96LS
			Sample Type	Soil	Soil	Soil
			Collected	01/22/96	01/22/96	01/22/96
			Received	01/23/96	01/23/96	01/23/96
			Reported	02/15/96	02/15/96	02/15/96
			Sample Description	SSB-4	SSB-5	SSB-6
Analysis	Date Analyzed	MDL				
MTBE	01/30/96	25 ug/kg		ND	ND	ND
Benzene	01/30/96	5.0 ug/kg		57 ug/kg	50 ug/kg	50 ug/kg
Toluene	01/30/96	25 ug/kg		94 ug/kg	81 ug/kg	84 ug/kg
Ethylbenzene	01/30/96	25 ug/kg		50 ug/kg	52 ug/kg	53 ug/kg
Xylenes, Total	01/30/96	75 ug/kg		160 ug/kg	190 ug/kg	180 ug/kg
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg		36 ug/kg	47 ug/kg	43 ug/kg
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg		52 ug/kg	64 ug/kg	59 ug/kg
Lead	01/26/96	5.00 mg/kg		256 mg/kg	315 mg/kg	117 mg/kg
Moisture	01/30/96	1.00 %		20.9 %	35.0 %	29.9 %
Diesel Range Organics	02/02/96	5.00 mg/kg		61.5 mg/kg	29.2 mg/kg	22.3 mg/kg

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	1179-96LS	1180-96LS	
			Sample Type	Soil	Soil	
			Collected	01/22/96	01/22/96	
			Received	01/23/96	01/23/96	
			Reported	02/15/96	02/15/96	
			Sample Description	SSB-8	SSB-9	
Analysis	Date Analyzed	MDL				
MTBE	01/30/96	25 ug/kg		ND	ND	
Benzene	01/30/96	5.0 ug/kg		ND	ND	
Toluene	01/30/96	25 ug/kg		49 ug/kg	60 ug/kg	
Ethylbenzene	01/30/96	25 ug/kg		44 ug/kg	58 ug/kg	
Xylenes, Total	01/30/96	75 ug/kg		140 ug/kg	180 ug/kg	
1,3,5-Trimethylbenzene	01/30/96	25 ug/kg		39 ug/kg	53 ug/kg	
1,2,4-Trimethylbenzene	01/30/96	25 ug/kg		51 ug/kg	61 ug/kg	
Lead	01/26/96	5.00 mg/kg		115 mg/kg	321 mg/kg	
Moisture	01/30/96	1.00 %		27.2 %	53.9 %	
Diesel Range Organics	02/02/96	5.00 mg/kg		ND α	71.1 mg/kg	

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

α ⇒ Analyzed On 02/01/96

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 599-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Analysis	Date Analyzed	MDL	Chem. Lab ID	1178-96LS	1180-96LS	
			Sample Type	Soil	Soil	
			Collected	01/22/96	01/22/96	
			Received	01/23/96	01/23/96	
			Reported	02/15/96	02/15/96	
			Sample Description	SSB-6	SSB-9	
Naphthalene	02/14/96	160 ug/kg		ND	ND	
Acenaphthylene	02/14/96	240 ug/kg		ND	ND	
Acenaphthene	02/14/96	80.0 ug/kg		419 ug/kg	859 ug/kg	
Fluorene	02/14/96	80.0 ug/kg		ND	ND	
Phenanthrene	02/14/96	12.0 ug/kg		223 ug/kg	713 ug/kg	
Anthracene	02/14/96	3.60 ug/kg		32.4 ug/kg	80.7 ug/kg	
Fluoranthene	02/14/96	12.0 ug/kg		447 ug/kg	1120 ug/kg	
Pyrene	02/14/96	20.0 ug/kg		503 ug/kg	1290 ug/kg	
Benzo[a]anthracene	02/14/96	2.80 ug/kg		156 ug/kg	421 ug/kg	
Chrysene	02/14/96	2.80 ug/kg		235 ug/kg	618 ug/kg	
Benzo[b]fluoranthene	02/14/96	2.40 ug/kg		117 ug/kg	249 ug/kg	
Benzo[k]fluoranthene	02/14/96	2.40 ug/kg		61.4 ug/kg	146 ug/kg	
Benzo[a]pyrene	02/14/96	3.20 ug/kg		134 ug/kg	387 ug/kg	
Dibenzo[a,h]anthracene	02/14/96	20.0 ug/kg		<200 ug/kg	<400 ug/kg	
Benzo[g,h,i]perylene	02/14/96	32.0 ug/kg		<320 ug/kg	<640 ug/kg	
Indeno[1,2,3-cd]pyrene	02/14/96	8.00 ug/kg		<80.0 ug/kg	<160 ug/kg	

Remarks

WI DNR Laboratory Certification #999446800

1178-96LS Elevated detection limit due to sample concentration.

1180-96LS Elevated detection limit due to sample concentration.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

LAKE SUPERIOR LABORATORIES

Chris Saari / Bruce

NORTHWEST DISTRICT HEADQUARTERS
Routing Slip

By Phyllis Holmbeck Date 1/5/95

__Bishop	__Kruger	__Brule
__Clark	__Kallenbach	_____
__Gantz	__Miller	__Cumberland
__Michels	__LeRoy	_____
__DeWitt	__Dunn	__Park Falls
__Fabert	__Kafura	_____
__Bierd	__Kendzierski	__Madison
__Conklin, K.	__Prohaska	_____
__Finance	__Spangberg	__LMD
__LaBumbard	__Sutton	_____
__Peterson	__Michaelsen	__NCD
__Stair	__Pratt	_____
__Tesky	__Moss	__SED
__Wallace, S.	__Ross	_____
__Gothblad	__Hayducsko	__SD
__Bartilson	__Holmbeck	_____
__LaRose	__Schweiger	__WD
__Gozdzialski	__Scott	_____
__Herrick	__Adams	
__Cable	__Monson	__ _____
__Hanson	__Weber	__ _____
__Pratt	__Smith, B.	__ _____
__Jennings	__Smith, T.	__ _____
__Kampa	__Ierace	__ _____
__Margenau	__Koshere	__ _____
__Johnson, C.	__Larson	
__Johannes	__Malischke	
__Peterson	__Roesler	
__Kies	__Ryan	
__Dettle	__Wallace, P.	
	__Conklin, D.	
	__Zeug	
	__Halverson	

___Answer for _____ sign
___Confer with me
___Follow through
___Note and return
___Note and toss
___For comments and/or approval
___Route and/or file
___For your information

RECEIVED
JAN 08 1996
DNR - SPOONER

COMMENTS: _____

Biotreat (Landfill)

8/27/93 FORM\PS871307.SMW

rec. 1/4/~~95~~ 96 PJH.

State of Wisconsin
Department of Natural Resources

NOTIFICATION TO TREAT OR DISPOSE OF PETROLEUM CONTAMINATED SOIL & WATER

Form 4400-120
Rev. 9-95

This form is required by the Department of Natural Resources (DNR) to ensure that the remediation of petroleum contaminated soil and water is in compliance with NR 500-540, NR 158, NR 419 and NR 445, Wis. Adm. Code. Failure to comply with applicable statutes and administrative rules may lead to violations of subchapters III and IV of Ch. 144, Wis. Stats. and may result in forfeitures of not less than $10 or more than $25,000 for each violation, pursuant to ss. 144.426(1), 144.74(1), 144.99, Wis. Stats., or fines of not less than $100 or more than $150,000 or imprisonment for not more than 10 years, or both, pursuant to s. 144.74(2), Wis. Stats. Each day of a continuing violation constitutes a separate violation. **Except for the remediation of virgin petroleum spills, this form needs to be submitted to the DNR 10 business days prior to the commencement of the remediation.**

DIRECTIONS: 1) Complete both sides of the form. 2) Have the responsible party sign the form. **This signature certifies that the information on this form and in all supporting documents is accurate.** 3) Submit the form with supporting documentation, lab reports and any maps to the appropriate District Air Management Program at least 10 business days prior to the commencement of remediation. 4) Submit a copy of this form to the DNR project manager and retain a copy for your records.

ERP #170

PART I - GENERAL INFORMATION

Site Name & Address: Hughitt Slip Property Superior, Wisconsin (no street address - see attached maps)	Date of Form Completion: January 4, 1996
Site #: Excavation #3 area (see Figure 3, attached)	Do Other Remediation Systems Exist at This Site? ☐ YES ☑ NO
County: Douglas	Site Type: ☐ LUST ☐ ERP ☐ CERCLA ☐ Other, Explain: spill site - apparently waste oil
Responsible Party Name & Address: Norman & Donna Camenker 70 Highgate Court Superior, Wisconsin 54880	Responsible Party Signature: Donna Camenker Telephone #: (715) 392-5457 (WI) (602) 855-4825 (Ariz.)
Consulting Firm Name & Address: Twin Ports Testing, Inc. 728 Garfield Avenue Duluth, Minnesota 55802	Consulting Firm Contact: Jon Hinkel, geologist Telephone #: (218) 722-1911

PART II - SOIL AND WATER DATA (Attach Lab Reports and Calculations) *

Type of Contamination: ☐ Gasoline ☐ Diesel ☐ Fuel Oil ☑ Waste Oil
☐ Chlorinated Organics ☐ Other: _____

Soil Concentration:

GRO: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

DRO: 2370 lb — 4240 mg/kg/10^6 x 2,800 lb/yd^3 x 200 yd^3 = 2370

Benzene: < .025 mg/kg/10^6 x 2,800 lb/yd^3 x 200 yd^3 = < 0.014 lb

Chlorinated Organics: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

Other: _____ lb — _____ mg/kg/10^6 x 2,800 lb/yd^3 x _____ yd^3 =

Water Concentration: GRO: _____ mg/L DRO: _____ mg/L Benzene: _____ mg/L

Chlorinated Organics: _____ mg/L Other: _____ mg/L

PART III - TREATMENT OR DISPOSAL FACILITY INFORMATION

Treatment/Disposal Facility Name & Address:
Jackson County Landfill, Inc.
Route 3, Box 95B
Black River Falls, WI 54615

Facility ID: 02004

Air Pollution Control Permit #: Not necessary

Facility Contact: Alina Limberg
Telephone #: (715) 284-2262

Facility Located in 10-county Area in Southeast Wisconsin: No

Distance to Nearest Residence or Business: 1½ miles

Headquarter Address: Same as above.

Portable Sources Only: Has a Portable Source Relocation Notification (Form 4500-25) Been Submitted for this Location: ☐ YES ☐ NO N/A

* Please note: the concentrations provided for DRO and Benzene are maximum readings; the bulk of our sample analyses results are of much lower concentrations.

PART III - SOIL VACUUM EXTRACTION OR GROUNDWATER REMEDIATION

Site Contact & Telephone #:	Proposed Operations (Attach Calculations) Anticipated Start-Up Date:
Is Site Located in the 10-county Area in	Estimated Project Duration:
Distance to Nearest	# of Wells:
Pilot Test/Soil Venting Only (Attach Lab Reports and Calculations) Date of Test: Flow Rate (scfm): - Not Applicable - Total Withdrawal of Air (scf): Total VOC Emission Rate (lb/hr): Benzene Emission Rate (lb/hr):	# of Emission Points: Stack Height: - Not Applicable - Maximum Equipment Flow Rate (scfm or gpm): Total VOC Emission Rate (lb/hr): Benzene Emission Rate (lb/hr): Benzene Emission Rate (lb/yr):

PART III - OTHER REMEDIATION METHODS

Proposing Other Remediation Method: ☐ YES Method Name:_____

Attach a project description for other remediation methods including landspreading, passive aeration and bioremediation. At a minimum, the information submitted should include the following items (with any supporting lab reports and calculations):

✓ Address/Location of Remediation Site - Indicate if this location is in the 10-county area in Southeast Wisconsin and the distance to the nearest residence or business. Include a map or site plan if appropriate.

✓ Description of Remediation Method

✓ Project Contact & Telephone #

✓ Anticipated Start-Up and Estimated Project Duration - Not Applicable -

✓ Highest Estimated Hourly VOC Emissions

✓ Highest Estimated Hourly and Annual Benzene Emissions

✓ Emission Testing Methodology

✓ Final Destination of Soil

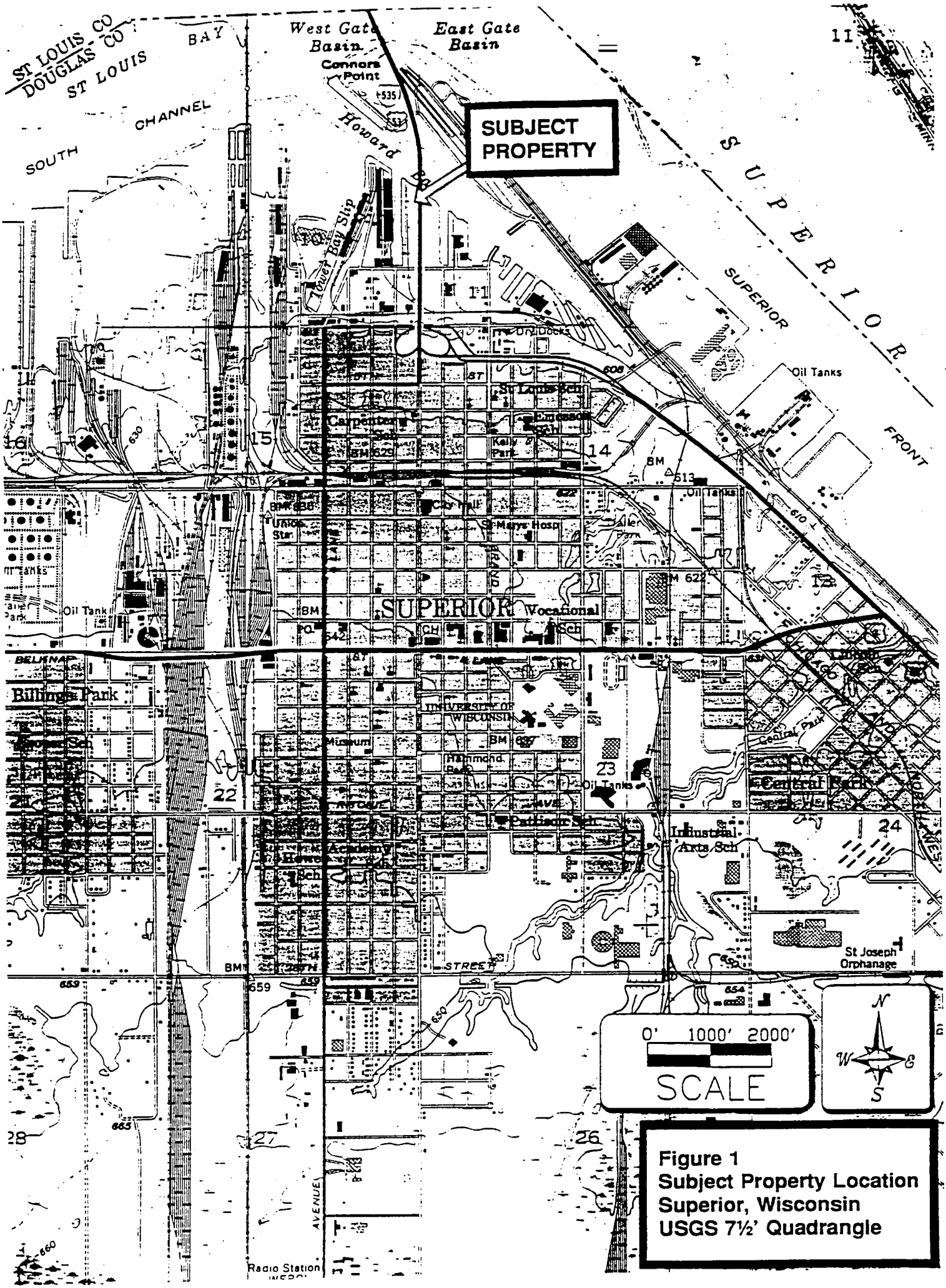


Figure 1
Subject Property Location
Superior, Wisconsin
USGS 7½' Quadrangle

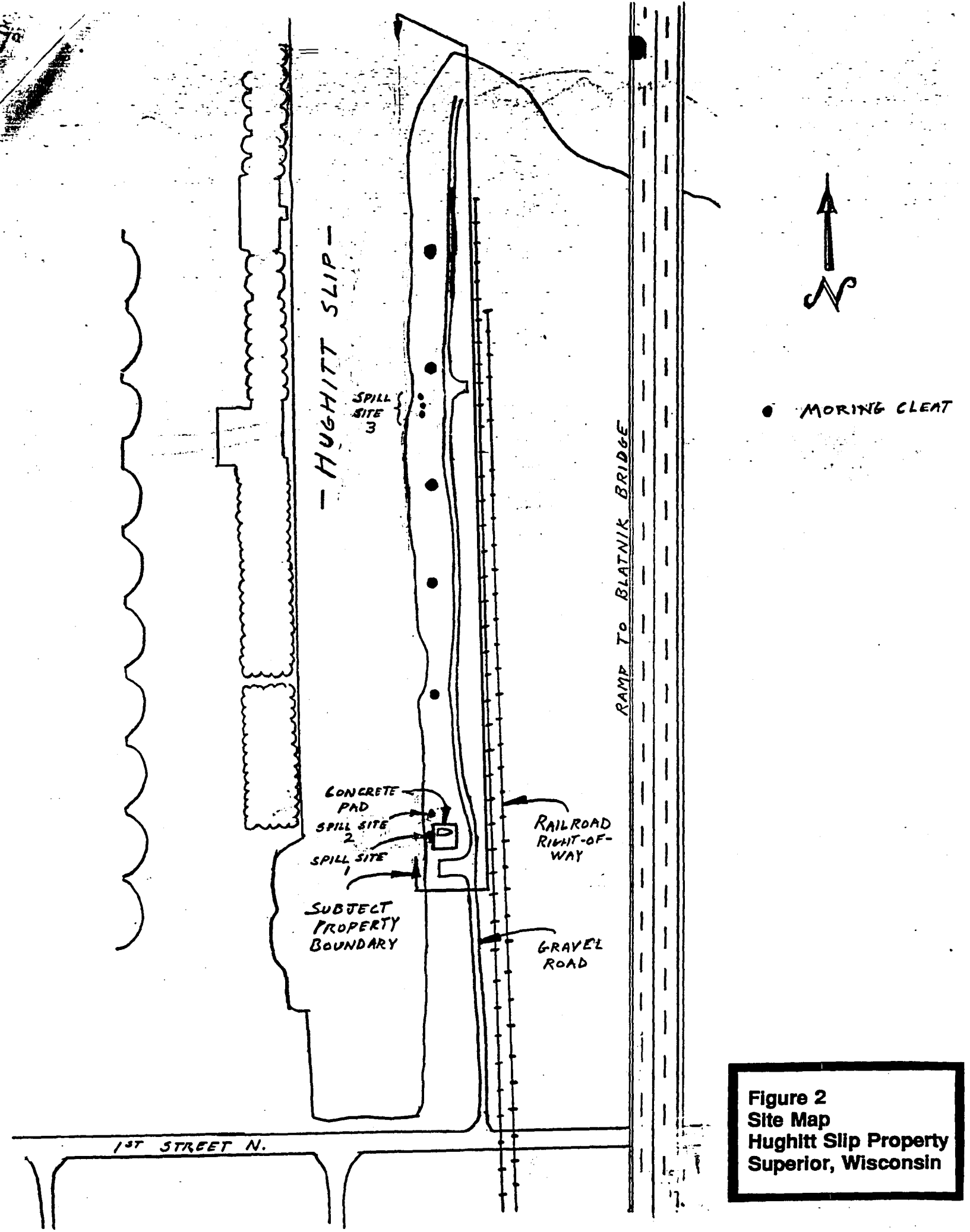


Figure 2
Site Map
Hughitt Slip Property
Superior, Wisconsin

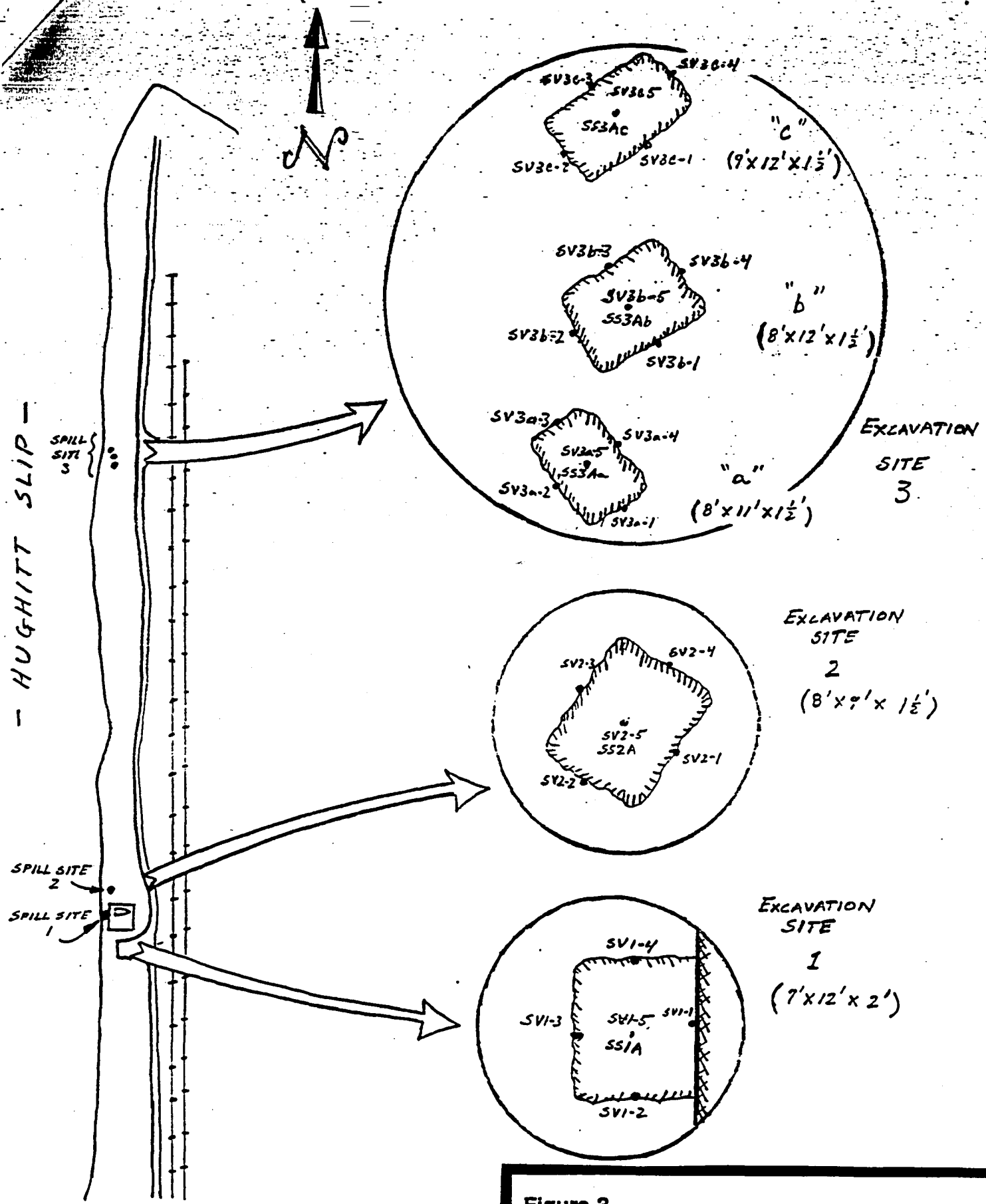


Figure 3
Site Map Showing Sampling Location Details
Hughitt Slip Property
Superior, Wisconsin

LAKE SUPERIOR LABORATORIES
A DIVISION OF TWIN PORTS TESTING, INC.
728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

Date: 12/18/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

LAB ID #	SAMPLE ID
4392-95LS	SS1A
4393-95LS	SS2A
4394-95LS	SS3Aa
4395-95LS	SS3Ab
4396-95LS	SS3Ac

REVISED
12/18/95

Signature _____
Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
DRO	NA	Pass	NA	NA	NA	Pass	Pass
BTEX/PVOC	NA	Pass	NA	NA	NA	Pass	Pass
INORGANICS	Pass	NA	NA	Pass	NA	NA	NA

Remarks

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	4392-95LS	4393-95LS	4394-95LS
			Sample Type	Soil	Soil	Soil
			Collected	09/26/95	09/26/95	09/26/95
			Received	09/28/95	09/28/95	09/28/95
			Reported	12/18/95	12/18/95	12/18/95
			Sample Description	SS1A	SS2A	SS3Aa
Analysis	**Date Analyzed**	**MDL**				
MTBE	10/04/95	25.0 ug/kg		ND α	ND	<200 ug/kg
Benzene	10/04/95	5.00 ug/kg		ND α	ND	<25.0 ug/kg
Toluene	10/04/95	25.0 ug/kg		ND α	ND	765 ug/kg
Ethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	238 ug/kg
Total Xylenes	10/04/95	75.0 ug/kg		ND α	ND	251 ug/kg
1,3,5 Trimethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	1310 ug/kg
1,2,4 Trimethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	8410 ug/kg
Lead	10/11/95	10.0 mg/kg		ND	ND	254 mg/kg
Moisture	10/04/95	1.00 %		17.8 %	19.0 %	24.4 %
Diesel Range Organics	09/29/95	5.00 mg/kg		5.10 mg/kg	ND	4240 mg/kg α

Remarks

REVISED REPORT

4394-95LS Elevated detection limit due to dilution effect.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

α ⇒ Analyzed On 10/03/95

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	4395-95LS	4396-95LS	
			Sample Type	Soil	Soil	
			Collected	09/26/95	09/26/95	
			Received	09/28/95	09/28/95	
			Reported	12/18/95	12/18/95	
			Sample Description	SS3Ab	SS3Ac	
Analysis	Date Analyzed	MDL				
MTBE	10/04/95	25.0 ug/kg		89.6 ug/kg	<200 ug/kg	
Benzene	10/04/95	5.00 ug/kg		19.1 ug/kg	<10.0 ug/kg	
Toluene	10/04/95	25.0 ug/kg		219 ug/kg	<200 ug/kg	
Ethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg	
Total Xylenes	10/04/95	75.0 ug/kg		<200 ug/kg	<200 ug/kg	
1,3,5 Trimethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg	
1,2,4 Trimethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg	
Lead	10/11/95	10.0 mg/kg		257 mg/kg	160 mg/kg	
Moisture	10/04/95	1.00 %		28.2 %	27.3 %	
Diesel Range Organics	09/29/95	5.00 mg/kg		11.8 mg/kg α	8.26 mg/kg	

Remarks

REVISED REPORT

4395-95LS Elevated detection limit due to dilution effect.

4396-95LS Elevated detection limit due to dilution effect.

MDL $\Rightarrow$ Method Detection Limit
ND $\Rightarrow$ Not Detected at or above MDL

$\alpha \Rightarrow$ Analyzed On 10/03/95

SERIAL NUMBER

№ 13367

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

TPT # 561-95E-RA

Project Name Hughitt Slip Property No. • P.O.#

Client Norman & Donna Lamenker Report To Jon Hinkel

Address

Bill To 561-95E-RA

Phone Fax

Remarks

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: PVOC	Analyses: Pb	LSL No.
SS1A	9/26/95	3:50 pm			✓	3		✓	✓	✓	4392
SS2A	9/26/95	4:20 pm			✓	3		✓	✓	✓	4393
SS3Aa	9/26/95	5:00 pm			✓	3		✓	✓	✓	4394
SS3Ab	9/26/95	5:10 pm			✓	3		✓	✓	✓	4395
SS3Ac	9/26/95	5:20 pm			✓	3		✓	✓	✓	4396

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R J Hinkel	9/28/95 4:03 pm	Carolyn Keene			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day ____ or 24 Hour Rush ____ (additional charge)

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
TELEFAX 715-372-4836

George E. Meyer
Secretary

December 28, 1995

FILE COPY

MR AND MRS NORMAN CAMENKER
70 HIGHGATE COURT
SUPERIOR WI 54880

Re: Petroleum Contamination at the Hughitt Slip Property (NWD ERP Case #16-00170), Superior, Wisconsin

Dear Mr. and Mrs. Camenker:

The Department has received the work plan for Continuation of Remedial Action at the above named site, prepared by Twin Ports Testing, Inc. (TPT) and dated December 21, 1995.

After reviewing the proposal, the Department finds it to be acceptable, and we encourage you to instruct TPT to proceed with the measures specified in the work plan. As was pointed out in the work plan, it is likely that some type of continued groundwater monitoring will be necessary before this case could be reviewed for closure.

If you have any questions concerning this letter or the project in general, please do not hesitate to write or call me at 715/372-4866.

Sincerely,

Christopher A. Saari

Christopher A. Saari
Hydrogeologist

cc: Jon Hinkel - Twin Ports Testing, Inc.

Page 1 (of 2)

TRANSMITTAL

SINCE 1972

TWIN PORTS TESTING, inc.

1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
FAX # (715) 392-7163 • (715) 392-7114

To: Chris Saari
Wisconsin DNR
P.O. Box 125
Brule, Wisconsin 54820

Date: 12/22/95
Job #: 599-95E.RA
Client: Norman & Donna Camenker
Project: Hughitt Slip Property

We are sending you:

- ✓ Enclosed
- ____ Separate Cover
- ____ By our Messenger
- ____ By your Messenger
- ____ Airmail
- ✓ 1st Class
- ____ Other
- ____ Shop Drawings
- ____ Other Drawings
- ____ Specifications
- ____ Other

# OF COPIES	REPORT/PROPOSAL ID	LATEST DATE	DESCRIPTION OR REMARKS
(1)	Proposal / Work Plan -		Continuation of Cleanup Measures at the Hughitt Slip Property in Superior Wisconsin

THESE ARE TRANSMITTED as checked below:

- For approval ☑
- For your use ☐
- As requested ☐
- For review & comment ☐
- No Exception Taken ☐
- Make corrections noted ☐
- Revise & resubmit ☐
- Submit specified item ☐

Remarks: Dear Chris,

Enclosed you will find a copy of TPTS proposal/workplan for continued work at the Hughitt Slip property. Please review the material and feel free to call me with any questions or comments you may have. As you and I discussed earlier, this work plan has been designed with a limited scope, and is intended to address the site's contamination in a reasonable manner, without incurring unnecessary expense or involvement. We would

COPIES TO: Encl. Trans.

Norman and Donna Camenker

Sincerely,

(over)

Page 2 of 2

TRANSMITTAL

SINCE 1972
TWIN PORTS TESTING, inc.
1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
FAX # (715) 392-7163 • (715) 392-7114

To: _____ Date: _____

_____ Job #: _____

_____ Client: _____

_____ Project: _____

We are sending you:

_____ Enclosed
_____ Separate Cover
_____ By our Messenger
_____ By your Messenger _____
_____ Airmail
_____ 1st Class
_____ Other
_____ Shop Drawings
_____ Other Drawings
_____ Specifications
_____ Other

# OF COPIES	REPORT/PROPOSAL ID	LATEST DATE	DESCRIPTION OR REMARKS

THESE ARE TRANSMITTED as checked below:

For approval ☐ As requested ☐ No Exception Taken ☐ Revise & resubmit ☐
For your use ☐ For review & comment ☐ Make corrections noted ☐ Submit specified item ☐

Remarks: like to obtain a written approval from the DNR for the workplan prior to the project's commencement.

I look forward to hearing from you.

Thank you —

COPIES TO: **Encl.** **Trans.**

_____ _____ _____
_____ _____ _____
_____ _____ _____

Sincerely,

Jon Hinkel
(218) 722-1911

SINCE 1972

TWIN PORTS TESTING INC.

1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
(715) 392-7114 • FAX (715) 392-7163

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
(218) 722-1911 • FAX (218) 722-3295

8 INDUSTRIAL PARK ROAD • NEGAUNEE, MICHIGAN 49866
(906) 226-6653 • FAX (906) 226-3699

December 21, 1995

Proposal 95P-183E

Norman and Donna Camenker
70 Highgate Ct.
Superior, Wisconsin 54880

(DNR File Copy)

Re: Continuation of Remedial Action
Hughitt Slip Property
Superior, Wisconsin

Dear Mr. and Mrs. Camenker:

Since you and I last spoke, Mr. Chris Saari of the Wisconsin Department of Natural Resources (DNR) has responded to Twin Ports Testing, Inc's. (TPT's) reports of the contamination encountered on the Hughitt Slip property in Superior, Wisconsin, in a correspondence, dated December 8, 1995. The correspondence indicated that the DNR's present concern regarding the property lies with the elevated contaminant concentrations remaining in the 3a excavation soils. Though no mention was made in the correspondence specifying a concern regarding the site's groundwater, it is TPT's opinion that the DNR site closure committee will require confirmation of groundwater integrity as well as confirmation of soil integrity for the property's sites before closure will be granted. Mr. Saari concurs with TPT's opinion (TPT telephone communication with Chris Saari, 12/12/95).

In an effort to better assess the soil conditions at each of the excavated sites, TPT recently directed the laboratory to re-evaluate the analyses results of the September excavation soil samples with regard to detection limits of the petroleum volatile organic compound (PVOC) parameters. The laboratory responded by reporting their detection limits for these parameters well below the original detection limits of 200 parts per billion (ppb; see laboratory report revision, attached). The revised laboratory reports indicate no detections of benzene for sites 1 and 2 at concentrations at or above 5 ppb. The analytical results for all parameter concentrations of the soil samples of sites 1 and 2 are thus confirmed to lie below DNR Interim Soil Cleanup Guidelines (see attached listing); no additional environmental work should be required at either of these sites by the DNR.

With regard to the individual sites of 3a, 3b and 3c, it appears that DRO and/or benzene concentration lie above or may lie above current DNR Interim Soil Cleanup Guidelines. Such results serve to indicate the need for further cleanup efforts as determined by the DNR.

WORK PLAN

TPT proposes enlarging the present excavations numbered 3a, 3b, and 3c in all directions in an effort to remove remaining contaminated soil. The excavations would be conducted using a backhoe as before, guided by a TPT Environmental Technician using a portable photoionization detector (PID) according to standard jar-headspace procedure. Laboratory conformation soil samples would be collected from the excavation's bases and sidewalls and transported to the laboratory according to standard chain-of-custody procedures. Excavated soils would be loaded directly into dump trucks for transport to an appropriate remediation/disposal facility. Any groundwater entering the excavations would be pumped into a tanker truck for disposal with an appropriately permitted agency or firm.

The excavations would be backfilled using uncontaminated soil imported from a separate locality. During backfilling, one to three screen - riser assemblies would be installed in the excavated area to serve as collection points for groundwater sampling. Efforts would be made to develop these temporary groundwater collections points as fully as possible, with one or more groundwater samples collected for submission to the laboratory.

Laboratory soil and groundwater samples would be analyzed for diesel range organics (DRO), petroleum volatile organic compounds (PVOC) and lead. Polynuclear aromatic hydrocarbon (PAH) analyses would be conducted for soil and groundwater samples collected from the general area of site 3a.

Following completion of the field work, a report would be prepared summarizing the project's methods and results for review by you as well as the DNR.

ESTIMATED COSTS

At present, TPT is in the process of gathering estimates from various firms and contractors for the excavation, hauling and disposal of the site's remaining contaminated soil; the pumping, trucking and disposal of any groundwater which may accumulate in the excavations during soil removal; and the delivery of backfill material. As the various estimates are received, TPT will make them available to you for comparison. Following your acceptance of the appropriate firms or contractors, TPT will schedule the field work and continue with the project as planned. Preliminary groundwater sampling and analysis is anticipated as a requisite to gaining a cost effective means of any wastewater disposal which may be necessary.

FIELD WORK

Contractor:

Excavation, and trucking: petroleum contaminated soil (est. 200 cubic yards or less)	$ To be determined
Disposal: petroleum contaminated soil	$ To be determined
Removal of wastewater from excavation (est. 2300 gallons or less)	$ To be determined
Treatment/disposal: excavation wastewater	$ To be determined

Environmental Consultant:

Preliminary groundwater sample collection; excavation monitoring; soil sample collection and field screening; screen-riser assembly installation(s); development and groundwater sample collection (Environmental Technician I: est. 12-15-hours)	$ 552.00 - 690.00
Equipment and Supplies (vehicle, PID, sample jars, 1-3 screen-riser assemblies, 1-3 disposable bailers, lead filters, disposable sampling gloves)	$ 214.00 - 338.00

LABORATORY ANALYSES

Soils:

8-15 samples: DRO, PVOC, Lead 1-3 samples: PAH	$ 1171.00 - 2370.00

Groundwater (including field blank):

2-4 samples: DRO, PVOC, Lead, PAH	$ 465.00 - 803.00
1 sample: TPH, BTEX, Lead	

PROJECT MANAGEMENT/REPORTING

Environmental Consultant: (Environmental Technician II, est. 20-30 hours; Environmental Dept. Manager, est. 2 hours; Secretarial Services)	$ 1190.00 - 1700.00

SCHEDULE

It is anticipated that the remainder of the cost estimates will be available within one week. Following your approval of the necessary contractors or firms, we anticipated that the project's field work may commence within two weeks thereafter. The project's final report should be available within one month of the field work's commencement.

We appreciate the opportunity to submit this proposal and look forward to working with you on the project. If you have any questions regarding this proposal, please feel free to contact us at (906) 226-6653 or (218) 722-1911.

Sincerely,

TWIN PORTS TESTING, INC.

Jon Hinkel, Geologist

Brian E. McVean, P.E.
Environmental Department Manager

RJH:pjd

Attachments: Revised Laboratory Reports
DNR Interim Soil Cleanup Guidelines

This proposal is being provided to you in duplicate. If you agree to accept this proposal, along with the General Conditions of Service, please sign and return one copy to us to use as our authorization to proceed with this project.

Signed Dona Camenker - Raymond B Camenker

Date 12/21/95

Printed Name DONA CAMENKER

Title _____

Company _____

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 12/18/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

LAB ID #	SAMPLE ID
4392-95LS	SS1A
4393-95LS	SS2A
4394-95LS	SS3Aa
4395-95LS	SS3Ab
4396-95LS	SS3Ac

REVISED
12/18/95

Signature _____
Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
DRO	NA	Pass	NA	NA	NA	Pass	Pass
BTEX/PVOC	NA	Pass	NA	NA	NA	Pass	Pass
INORGANICS	Pass	NA	NA	Pass	NA	NA	NA

Remarks

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	4392-95LS	4393-95LS	4394-95LS
			Sample Type	Soil	Soil	Soil
			Collected	09/26/95	09/26/95	09/26/95
			Received	09/28/95	09/28/95	09/28/95
			Reported	12/18/95	12/18/95	12/18/95
			Sample Description	SS1A	SS2A	SS3Aa
Analysis	Date Analyzed	MDL				
MTBE	10/04/95	25.0 ug/kg		ND α	ND	<200 ug/kg
Benzene	10/04/95	5.00 ug/kg		ND α	ND	<25.0 ug/kg
Toluene	10/04/95	25.0 ug/kg		ND α	ND	765 ug/kg
Ethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	238 ug/kg
Total Xylenes	10/04/95	75.0 ug/kg		ND α	ND	251 ug/kg
1,3,5 Trimethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	1310 ug/kg
1,2,4 Trimethylbenzene	10/04/95	25.0 ug/kg		ND α	ND	8410 ug/kg
Lead	10/11/95	10.0 mg/kg		ND	ND	254 mg/kg
Moisture	10/04/95	1.00 %		17.8 %	19.0 %	24.4 %
Diesel Range Organics	09/29/95	5.00 mg/kg		5.10 mg/kg	ND	4240 mg/kg α

Remarks

REVISED REPORT

4394-95LS Elevated detection limit due to dilution effect.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

α ⇒ Analyzed On 10/03/95

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

			Chem. Lab ID	4395-95LS	4396-95LS
			Sample Type	Soil	Soil
			Collected	09/26/95	09/26/95
			Received	09/28/95	09/28/95
			Reported	12/18/95	12/18/95
			Sample Description	SS3Ab	SS3Ac
Analysis	Date Analyzed	MDL			
MTBE	10/04/95	25.0 ug/kg		89.6 ug/kg	<200 ug/kg
Benzene	10/04/95	5.00 ug/kg		19.1 ug/kg	<10.0 ug/kg
Toluene	10/04/95	25.0 ug/kg		219 ug/kg	<200 ug/kg
Ethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg
Total Xylenes	10/04/95	75.0 ug/kg		<200 ug/kg	<200 ug/kg
1,3,5 Trimethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg
1,2,4 Trimethylbenzene	10/04/95	25.0 ug/kg		<200 ug/kg	<200 ug/kg
Lead	10/11/95	10.0 mg/kg		257 mg/kg	160 mg/kg
Moisture	10/04/95	1.00 %		28.2 %	27.3 %
Diesel Range Organics	09/29/95	5.00 mg/kg		11.8 mg/kg α	8.26 mg/kg

Remarks

REVISED REPORT

4395-95LS Elevated detection limit due to dilution effect.

4396-95LS Elevated detection limit due to dilution effect.

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

α ⇒ Analyzed On 10/03/95

SERIAL NUMBER
№ 13367

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295
A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

TPT # 561-95E.RA

Project Name: Hughitt Slip Property No. ___ P.O.# ___

Client: Norman & Donna Cumenker
Report To: Jon Hinkel

Address: ___

Bill To: 561-95E-RA

Phone: ___ Fax: ___

Remarks: ___

Sampler Signature: R J Hinkel

Sampler (Print): R. J. Hinkel

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	DRO	PVOC	Pb	LSL No.
SS1A	9/26/95	3:50 pm			✓	3		✓	✓	✓	4392
SS2A	9/26/95	4:20 pm			✓	3		✓	✓	✓	4393
SS3Aa	9/26/95	5:00 pm			✓	3		✓	✓	✓	4394
SS3Ab	9/26/95	5:10 pm			✓	3		✓	✓	✓	4395
SS3Ac	9/26/95	5:20 pm			✓	3		✓	✓	✓	4396

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R J Hinkel	9/28/95 4:05 pm	Carolyn Kruger 9-28-95			

Turnaround Time: 2 Week ✓ 2-5 Day ___ or 24 Hour Rush ___ (additional charge)

Received April 1994

Table 1
HAZARDOUS SUBSTANCE/WASTE RELEASES:

INTERIM SOIL CLEANUP GUIDELINES--PETROLEUM CONTAMINATION

BTEX (1)	GRO/DRO	Soil Type (2)	DNR Closeout Action Soils Accessible	 Soils Inaccessible
<= NR 720	<= 100 ppm	Permeable (K > 10 E-6 cm/s)	Close	Close
<= NR 720	<= 250 ppm	Less Permeable (K <= 10 E-6 cm/s)	Close	Close
<= NR 720 or > NR 720	> applic. GRO/DRO		Require additional work unless not technically or economically feasible	Close with consideration of deed instrument according to guidelines

---

(1) BTEX: proposed criteria developed in preparation of NR 720:

Benzene	5.5 ug/kg
Toluene	1500 ug/kg
Ethylbenzene	2900 ug/kg
Xylenes	4100 ug/kg
1,2-DCA	4.9 ug/kg

(2) K: Saturated hydraulic conductivity

Since 1972
TWIN PORTS TESTING inc.
1301 NORTH THIRD STREET ■ SUPERIOR, WISCONSIN 54880 ■ (715) 392-7114

General Conditions of Service

These General Conditions of Service, including any Supplemental Conditions of Service which are or may become applicable to the services to be provided in the Proposal, are incorporated by reference into the foregoing Proposal and shall, if said Proposal is accepted by Client, be part of the Agreement under which services are to be performed by Twin Ports Testing, Inc.

SECTION 1: SCOPE OF WORK

(a) It is understood that the scope of work and time schedule defined in the Proposal are based on the information provided by Client. If this information is incomplete or inaccurate, or if unexpected site conditions are discovered, the scope of work may change, even as the work is in progress. If the Client requests additional services or when a change in the scope of work or time schedule is necessary, a written amendment to the Agreement shall be executed by the Client and Twin Ports Testing, Inc. as soon as practicable and consent to such amendments shall not be unreasonably withheld.

(b) The scope of work shall include all services provided by Twin Ports Testing, Inc., in its discretion which are reasonably necessary and appropriate for the effective and prompt fulfillment of Twin Ports Testing, Inc. obligations under the Agreement and all services shall be subject to the provisions of the Agreement, including these General Conditions and any supplemental conditions incorporated herein; it being expressly provided that all such services provided shall be invoiced and paid for in accordance with Section 3 below:

SECTION 2: CLIENT DISCLOSURES

(a) It shall be the duty of the Client to notify Twin Ports Testing, Inc. of any known or suspected hazardous substances which are or may be related to the services to be provided. Such hazardous substances shall include but not be limited to any substance which poses or may pose a present or potential hazard to human health or the environment whether contained in a product, material, by-product, waste or sample and whether it exists in a solid, liquid, semi-solid or gaseous form, piping, electrical cables or similar objects, whether above ground or below ground. This duty shall also apply to any of the foregoing substances which Twin Ports Testing, Inc. may be provided or obtain or which exist or may exist on or near any premises upon which services are to be performed by Twin Ports Testing, Inc. employees, agents or contractors. The Client shall notify Twin Ports Testing, Inc. of all such hazardous substances of which it has knowledge or which it reasonably suspects exist upon entering into this Agreement. Thereafter, disclosure and notification to Twin Ports Testing, Inc. shall be required immediately upon discovery of any other hazardous substances or upon discovery of increased concentrations of previously disclosed substances where the increased concentration makes them hazardous.

(b) Following any disclosure as set forth in the preceding paragraph, or if any hazardous substances are discovered or reasonably suspected by Twin Ports Testing, Inc. after its services are undertaken, Twin Ports Testing, Inc. may, at its discretion, discontinue its services. Whether or not Twin Ports Testing, Inc. discontinues its services in whole or in part, the Client and Twin Ports Testing, Inc. agree that the scope of services, schedule and the estimated fee or budget shall be adjusted in accordance with the disclosed information or condition, and Twin Ports Testing, Inc. may, at its discretion, terminate the Agreement. In the event that the Agreement is terminated pursuant to this Section, the Client shall pay Twin Ports Testing, Inc. for services and all termination expenses as set forth in Section 10 of this Agreement.

(c) If all or any part of the scope of work is to be performed in the general vicinity of a facility or in an area where dust, fumes, gas, noise vibrations or other particulate or nonparticulate matter is in the atmosphere where it raises a potential health hazard or nuisance to those working in the area of such conditions, Client shall notify Twin Ports Testing, Inc. of such conditions, potential health hazard or nuisance and thereafter Twin Ports Testing, Inc. shall take all necessary and reasonable measures to protect its employees against such possible health hazards or nuisances. The reasonable direct cost of such measures shall be born by the Client.

SECTION 3: PAYMENT, INTEREST AND BREACH

(a) Client agrees to pay invoices on receipt, and to pay interest on unpaid balances beginning thirty (30) days after invoice date at the rate of 1.5% per month, but not to exceed the maximum rate by law.

(b) In the event Client fails to pay Twin Ports Testing, Inc. within sixty (60) days following the invoice date, Twin Ports Testing, Inc. may consider the default a total breach of this Agreement and may, at its option, terminate all of its duties without liability to Client or others.

SECTION 4: ACCESS AND RESTORATION

(a) Client will furnish Twin Ports Testing, Inc. with access to the site. It is understood by Client that in the normal course of the work some damage to the site or materials may occur. While Twin Ports Testing, Inc. will take reasonable precautions to minimize damage, Twin Ports Testing, Inc. has not included the cost of restoration in the estimated charges and will not be liable for such damage. The correction of damage is the responsibility of Client. At Client's option, Twin Ports Testing, Inc. will restore the site and invoice the Client.

SECTION 5: SAMPLES

(a) All samples remaining after tests are conducted will be discarded sixty (60) days after submission of the written report unless Client requests, in writing, that Twin Ports Testing, Inc. store or ship the samples, at Client's expense.

SECTION 6: REPORTS AND OWNERSHIP OF DOCUMENTS

(a) Twin Ports Testing, Inc. shall furnish one (1) copy of each report to Client. Additional copies shall be furnished at the rates specified in the fee schedule. With the exception of Twin Ports Testing, Inc. Reports to Client, all documents, including original boring logs, field data, field notes, laboratory test data, calculations and estimates are and remain the property of Twin Ports Testing, Inc. Client agrees that all reports and other work furnished to the Client not paid for in full will be returned upon demand and will not be used for design, construction, permits or licensing.

(b) Twin Ports Testing, Inc. will retain principal documents relating to the services performed for five (5) years following submission of the report.

SECTION 7: STANDARD OF CARE

(a) Twin Ports Testing, Inc. represents that the services performed under this Agreement will be performed with the care and skill ordinarily exercised by reputable members of the profession practicing under similar conditions at the same time in the same or similar locality.

(b) No other warranty, expressed or implied, is made or intended by rendition of consulting services or by furnishing oral or written reports of the findings made.

(c) Any exploration, testing, surveys and analysis associated with the work will be performed by Twin Ports Testing, Inc. for the Client's sole use to fulfill the purpose of this Agreement and Twin Ports Testing, Inc. is not responsible for interpretation by others of the information developed. The Client recognizes that subsurface conditions beneath the Project site may vary from those encountered in borings, surveys or explorations and the information and recommendations developed by Twin Ports Testing, Inc. are based solely on the information available.

(d) Twin Ports Testing, Inc. will not be responsible for the failure of others to perform in accordance with the specifications or contract documents, and Twin Ports Testing, Inc. services shall in no way relieve others of their responsibilities.

(e) For work not on Twin Ports Testing, Inc. premises, Twin Ports Testing, Inc. will not be responsible for superintending, supervising or directing the work of contractors, sub-contractors, or others, or for job or site safety, those being the sole responsibility of others.

(f) Twin Ports Testing, Inc. will not be responsible for either setting or checking the accuracy of construction staking, or for staking or referencing locations of piling, caissons or footings, unless those functions are specifically included in the accompanying description of services. Twin Ports Testing, Inc., will reference results of tests and observations to control lines and elevations set as part of surveying or construction staking by others.

(g) Client shall be responsible for the cooperation of its employees and contractors in observing all radiation safety standards where radiographic or gamma ray equipment is employed.

SECTION 8: LIMITATION OF PROFESSIONAL LIABILITY

(a) It is agreed that the Client will limit any and all liability, claim for damages, cost of defense, or expenses to be levied against Twin Ports Testing, Inc. on account of design defects, breach of contract, errors, omissions, or professional negligence to a sum not to exceed $50,000 or the amount of Twin Ports Testing, Inc. fee, whichever is greater.

(b) The Client further agrees to notify any contractor or subcontractor who may perform work in connection with any design, report or study prepared by Twin Ports Testing, Inc. of such limiation of professional liability for design defects, breach of contract, errors, omissions or professional negligence and require as a condition precedent to their performing their work a like limitation of liability on their part as against Twin Ports Testing, Inc.

(c) Documents, including but not limited to, technical reports, original boring logs, field data, field notes, laboratory test data, calculations, and estimates furnished to the Client or its agents pursuant to this agreement are not intended or represented to be suitable for reuse by the Client or others on extensions of the Project or on any other project. Any reuse without Twin Ports Testing, Inc. written consent will be at Client's sole risk and without liability or legal exposure to Twin Ports Testing, Inc. or to Twin Ports Testing, Inc. contractor(s) and client shall indemnify and hold harmless Twin Ports Testing, Inc. and Twin Ports Testing, Inc. contractor(s) from all claims, damages, losses and expenses including attorney's fees arising out of or resulting therefrom.

(d) Under no circumstances shall Twin Ports Testing, Inc. be liable for extra work or other consequences due to changed conditions or for costs related to failure of the construction contractor or materialmen or service providers to install work in accordance with the plans and specifications.

(e) Client agrees to hold harmless, indemnify, and defend Twin Ports Testing, Inc. from and against any and all claims, losses, damages, liability and costs, including but not limited to costs of defense, arising out of this Agreement, whether insured or not, excepting only such liability as may arise out of the sole negligence of Twin Ports Testing, Inc. in the performance of services under this Agreement.

SECTION 9: LIABILITY INSURANCE

(a) Twin Ports Testing, Inc. represents that it and its agents, and consultants employed by it, is and are protected by Worker's Compensation insurance and that Twin Ports Testing, Inc. has coverage under liability insurance policies which Twin Ports Testing, Inc. deems reasonable and adequate. Twin Ports Testing, Inc. shall furnish certificates of insurance upon request. Within the limits and conditions of the insurance, and subject to the provisions of any Supplemental Conditions of service applicable to services involving or related to hazardous substances or constituents, including hazardous waste, Twin Ports Testing, Inc. agrees to indemnify and save harmless the Client from and against bodily injury and property damage losses arising directly from any negligent acts by Twin Ports Testing, Inc., its employees, agents and consultants employed by it, Twin Ports Testing, Inc. shall not be responsible for bodily injury and property damage losses arising from acts by the Client, its employees, agents, staff, consultants or subcontractors employed by it or by any other person or combination of persons. The Client agrees to limit the liability of Twin Ports Testing, Inc. to the limits of Twin Ports Testing, Inc. insurance. The Client is responsible for requesting specific inclusions or limits of coverage that are not present in Twin Ports Testing, Inc. insurance, the cost of such inclusions or coverage increased, if available, to be at the expense of the Client.

SECTION 10: TERMINATION

(a) This Agreement may be terminated by either party upon at least seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. The only exceptions to this seven-day written notice condition are Twin Ports Testing, Inc. rights to terminate this Agreement as set forth in Section 2. of the Agreement or to terminate this Agreement immediately if conditions making it more difficult than anticipated to drill at the specified locations are encountered which are not made known to Twin Ports Testing, Inc. prior to its arrival at the Project site. If this Agreement is terminated, Twin Ports Testing, Inc. shall be paid for services performed prior to the termination date set forth in the notice plus termination expenses. Termination expenses shall include personnel and equipment rescheduling and reassignment adjustments and all other related costs incurred directly attributable to termination.

SECTION 11: SEVERABILITY

(a) In the event that any provision herein shall be deemed invalid or unenforceable, the other provisions hereof shall remain in full force and effect, and binding upon the parties hereto.

SECTION 12: SECTION HEADINGS

(a) The heading or title of a section is provided for convenience and information and shall not serve to alter or affect the provisions included herein.

SECTION 13: SURVIVAL

(a) All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between the Client and Twin Ports Testing, Inc. shall survive the completion of services and the termination of this Agreement.

Department of Natural Resources

T Koeno
FYI
Susie

12/15/95

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

I.D. # 170

District: NWD County: Douglas (16)
Site Name: Hughitt Slip Property
Address:
Legal Municipality: Superior, City of
T V C

Case No.: PMN:
FID: 816105400
Proj. Mgr: C. Saari
Support Person:
Legal Desc: SE1/4 NE1/4 Sec 10, T 49, R 14 E W
Lat: N ___ ° ___ . ___ ' Long: W ___ ° ___ . ___ '

Date of Discovery: 08/29/95
Date of RP Contact: 12/08/95

PRIORITY SCREENING:
X 1 = High
___ 3 = Low
___ 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 Containers s. 144.77, Wis. Stat.
___ 7 = Other (Describe in Comments)

PROGRAMS INVOLVED: (L - LEAD S - SUPPORT)
___ Aban Containers
___ Lust
___ NR 600 Hazardous Waste
___ NR 500 Solid Waste
___ Spills
___ Superfund
___ Water Supply
___ Water Resources Mgt
L Env. Repair

RESPONSIBLE PARTY:
Business Name:
Owner/Mgr.: Norman & Donna Camenker
Address: 70 Highgate Court
Superior WI 54880
Phone: 715 / 392-5457
Contact Person: Same

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)	___	X
Soil Contamination	(5)	X	___
Direct Contact	(10)	___	___
Contaminated Surface Water	(7)	___	X
Contaminated Air	(8)	___	___
Other ___	(6)	___	___

CONSULTANT INFORMATION:
Company: Twin Ports Testing, Inc.
Contact Person: Jon Hinkel
Address: 728 Garfield Ave.
Duluth, MN 55802
Phone: 218 / 722-1911
List additional on separate sheet & attach.)

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

DATE:

SUPERIOR DNR OFFICE
1705 TOWER AVENUE
SUPERIOR WI 54880
PHONE: 715/392-7988
FAX: 715/392-7993

TO BRULE:		TO SPOONER:	
	L. WIESNER		G. LEROY
	D. ANDERSON		D. KAFURA
X	C Saari		J. ROSS

TO BAYFIELD:		TO MADISON:	
	B. SWANSON		B. HAGMAN - AM/10
	S. SCHRAM		J. CONNELLY - SW/3
	M. HALVORSON		L. SRIDARAN - SW/3

TO PARK FALLS:		TO OTHER:	
	W. WASKO		
		DEC	

FROM:

	FOR YOUR INFORMATION
	FOR YOUR COMMENTS
	FOR YOUR APPROVAL
	ROUTE AND RETURN TO ME

COMMENTS:

State of Wisconsin
Department of Natural Resources

TOXIC AND HAZARDOUS SPILL REPORT

Form 4-91 Rev. 6-86

St. Emergency Gov't. (608) 266-3232
U.S. Nat'l. Response Center (800) 424-8802
Chemtrec/Pesticides/Chlorine (800) 424-9300

Spill ID Number
Y Y M M D D 0-99

Date of Incident	Day of Week	Time of Incident		Reported By (Name)	Telephone Number
8-29-95	Tuesday	4:00	☐ A.M. ☒ P.M.	John Hinckle	( )
Date Reported	**Day of Week**	**Time Reported**		**Agency or Firm Reporting**	**Reported thru Div. Emergen. Gov't.**
8-30-95	Wednesday	9:00	☒ A.M. ☐ P.M.	Twin Ports Testing	☒ Yes ☐ No

Substance Involved	Quantity	Units	Person or Firm Responsible
Waste Oil	Unknown		unknown (Property owner-Norm & Dona Camenker)
Substance Involved	**Quantity**	**Units**	**Contact Name / Telephone Number**
			Dona Camenker / (715) 392-5457

Physical Characteristics

☐ Solid ☐ Liquid Color ____
☐ Semisolid ☐ Gas Odor ____

Cause of Incident
unknown

Exact Location Description (intersection, mileage, etc.)
Hewitt slip

County Location	¼¼, ¼, Section, Town, Range	DNR Dist	DNR Area	Groundwaters Affected
Douglas	___, ___, ___, T___N, R___	NWD	Brule	☐ Yes ☐ No ☒ Potential

Surface Waters Affected	Name of Surface Water
☐ Yes ☐ No ☒ Potential	St. Louis River

Date District Notified	Day of Week	Time District Notified	
8-30-95	Wednesday	8:10	☒ A.M. ☐ P.M.

District Person Notified	Telephone Number
Jim Hosch	(715) 635-4058

Date Investigated	Day of Week	Time Investigated	
Not			☐ A.M. ☐ P.M.

Person Investigating	Telephone Number
	( )

Action Taken By DNR

☒ No Action Taken ☐ Investigation ☐ Supervise/Conduct Cleanup
☒ Spiller Required To Take Action; Type ____
☐ Contractor Hired By DNR; Name ____
☐ Amount Recovered ____
☐ 29.29 Enforcement

Other Agencies on Scene

Local ____
State ____
Federal ____

Address — Street or Route
70 Highgate court

City, State, Zip Code
Superior WI 54880

Action Taken By Spiller

☐ No Action Taken ☐ No Notification ☒ Investigate
☐ Containment; Type ____
☒ Cleanup; Method Probably excavate & treat
☐ Amount Recovered ____
☐ Monitor ____
☐ Contractor Hired; Name ____
☐ Other Action ____

Spill Location

☐ Industrial Facility/Paper Mill/Chem. Co.
☐ Gas/Service Station/Garage, Auto Dealer, Repair Shop
☐ Ag Coop/Facility/Cheese Factory/Creamery
☐ Other Small Business (bank, grocery, insurance co., etc.)
☐ Public Property (city, county, state, church, school, etc.)
☐ Utility Co., Power Generating/Transfer Facility
☐ Private Property (home/farm)
☐ Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler
☐ Transportation Accident, Fuel Supply Tank Spill
☐ Transportation Accident, Load Spill
☐ Construction, Excavation, Wrecking, Quarry, Mine
☒ Other Boat slip

Spilled Substance Destination

☐ Air
☒ Soil
☒ Groundwater Ground water is only 3-4 feet deep
☐ Surface Water
☐ Storm Sewer
☐ Sanitary Sewer
☐ Contained/Recovered
☐ Other ____

Person Filing This Report (print name)
Steve LaValley

Signature	Date Signed
Steve LaValley	8-30-95

Additional Comments:

Twin Ports, while doing an environmental assessment, detected several minor spills of what appears to be waste oil. The consultant was told that he should contact DNR if it was a non-emergency when they called the spill # 1-800-943-0003. The spills are probably the result of illegal dumping.

PREPARER

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Brule Area Headquarters
6250 South Ranger Road
P.O. Box 125
Brule, WI 54820-0125
TELEPHONE 715-372-4866
TELEFAX 715-372-4836

George E. Meyer
Secretary

December 8, 1995

FILE COPY

MR AND MRS NORMAN CAMENKER
70 HIGHGATE ROAD
SUPERIOR WI 54880

SUBJECT: Petroleum Contamination at the Hughitt Slip Property, Superior, Wisconsin

Dear Mr. and Mrs. Camenker:

The Department has received the Phase II Sampling and Testing Results, prepared for the above named site by Twin Ports Testing, Inc. (TPT) and dated September 12, 1995, and the Preliminary Results - Remedial Action, also prepared by TPT and dated November 29, 1995. These reports describe investigative and remedial actions taken by TPT in response to environmental contamination encountered on this property during a Phase I investigation.

Based on the information we have received, the Department believes that you are responsible for restoring the environment at this site under Section 144.76, Wisconsin Statutes, 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 twofold: 1) to describe your legal responsibilities, and 2) to provide you with the results of the Department's review of the work that has been completed to date.

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative rules. The hazardous substances spill law, Section 144.76 (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 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 NR 140 establishes groundwater standards.

Department Review of Previous Work:

After reviewing the reports submitted by TPT, it is apparent that additional remedial actions are necessary here. The sample collected at the base of excavation 3a contained DRO levels in excess of the ch. NR 720, Wis. Adm. Code, soil cleanup standards. You should work with TPT to formulate a plan to fully define and remediate the contamination remaining at this site, and to properly treat or dispose of the excavated contaminated soil in accordance with ch. NR 718, Wis. Adm. Code.

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 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:

Christopher A. Saari
WDNR Brule Area Headquarters
6250 S. Ranger Rd.
PO Box 125
Brule, WI 54820-0125

Unless otherwise requested, please send only one copy of all plans and reports. Correspondence should be identified with the assigned DNR identification number which will be assigned to your site within 7 days.

Additional Information:

If you are interested in obtaining the protection of limited liability under s. 144.765, Stats., please contact the Contaminated Land Recycling Program at (800) 367-6076 (instate long distance) or (608) 264-6020 (local or out of state), in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 144.765 Stats., is available to persons who meet the definition of "purchaser" in s. 144.765 (1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

If you have any questions about this letter or your responsibilities, please call me at (715) 372-4866.

Thank you for your cooperation.

Sincerely,

Christopher A. Saari
Hydrogeologist

Attach.

cc: Jon Hinkel - Twin Ports Testing, Inc.

TRANSMITTAL

SINCE 1972

TWIN PORTS TESTING, inc.

1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
FAX # (715) 392-7163 • (715) 392-7114

To: Chris Saari
WDNR
P.O. Box 125
Brule, Wisconsin 54820

Date: 12/1/95
Job #: 561-95E.RA
Client: Normon & Donna Camenker
Project: Hughtt Slip Property: clean-up

We are sending you:

- ✓ Enclosed
- ____ Separate Cover
- ____ By our Messenger
- ____ By your Messenger
- ____ Airmail
- ✓ 1st Class
- ____ Other
- ____ Shop Drawings
- ____ Other Drawings
- ____ Specifications
- ____ Other

# OF COPIES	REPORT/PROPOSAL ID	LATEST DATE	DESCRIPTION OR REMARKS
(1)	Phase II Results Report		

THESE ARE TRANSMITTED as checked below:

- For approval ☐
- For your use ☑
- As requested ☐
- For review & comment ☐
- No Exception Taken ☐
- Make corrections noted ☐
- Revise & resubmit ☐
- Submit specified item ☐

Remarks: Dear Chris,
Please attach the enclosed report as an appendix piece to the "Preliminary Results - Remedial Action" report I mailed to you yesterday. I suspect that the copy you were mailed is missing this material.
Thank you

COPIES TO: (Normon & Donna Camenker) — Encl. ____ Trans. ____

Sincerely,

Jon Hinkel

SINCE 1972

TWIN PORTS TESTING INC.

1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
(715) 392-7114 • FAX (715) 392-7783

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
(218) 722-1911 • FAX (218) 722-3295

8 INDUSTRIAL PARK ROAD • NEGAUNEE, MICHIGAN 49866
(906) 226-6653 • FAX (906) 226-3699

September 12, 1995
TPT # 552-95E.MM

Mrs. Donna Camenker
70 Highgate Road
Superior, Wisconsin 54880
Phone: (715) 392-5457

Re: Phase II Sampling and Testing Results
Hughitt Slip Property
Superior, Wisconsin

Dear Mrs. Camenker:

Twin Ports Testing, Inc. (TPT) is pleased to provide the following results of the Phase II soil sampling and testing investigation conducted at the Hughitt Slip property (Lots 1-9, Block 3, of the West Superior 8th Division) in Superior, Wisconsin (Figure 1). The Phase II investigation followed from recommendations listed in a Phase I Environmental Property Assessment completed for the property in August, 1995 (TPT # 539-95E.PI) and was conducted according to the Work Plan outlined in TPT Proposal # 95P-115E.

METHODS

Field work of the Phase II investigation was conducted August 24, 1995. Soil samples were collected by TPT environmental technicians from the three areas of ground staining identified on the Hughitt Slip property in the Phase I report (Figure 2). The soil samples were collected at approximately one foot deep each using hand spades, and screened in the field for petroleum related organic vapors using a portable photoionization detector (PID). As the northern-most area of ground staining exhibited a series of more widely spaced stains, soil samples were collected and screened from three ponts in the area. Results of the field screening revealed organic vapor concentrations ranging from 0.0 to 51 parts per million (ppm) throughout the sample suite (Table 1).

Laboratory samples were analyzed from each of the three separate areas of ground staining for diesel range organics (DRO); petroleum volatile organic compounds (PVOC); lead, cadmium and chromium (Pb, Cd, Cr); and polychlorinated biphenyls (PCB).

65.1

RESULTS

Results of the analyses revealed moderate to high concentrations of diesel range organics (45.1-10,300 ppm); various minor detections of several specific petroleum related compounds; minor to moderate concentrations of chromium (9.05 - 6.51 ppm); and moderate to moderately high concentrations of lead (46.5 - 222 ppm). No cadmium or polychlorinated biphenyl concentrations were detected within the sample suite (Table 2).

REMARKS

In consideration of the elevated concentration of lead indicated in the SS1 soil sample, an additional lead analysis involving toxicity characteristics leaching procedure (TCLP) is recommended for the SS1 sampling area. Should results of the TCLP analysis indicate a leachable lead concentration above 5 ppm, soil from that area will be classified as hazardous waste and must be disposed of accordingly. Assuming the concentration of leachable lead is found to lie below 5 ppm, soil from that area may be considered as nonhazardous, and may be disposed of by conventional means, such as thermal treatment.

In consideration of the high concentration of diesel range organics, but low concentrations of petroleum volatile organic compounds in the area of SS1, a potential exists for significant concentrations of polynuclear aromatic hydrocarbons (PAH) to be present at the site also. Testing for PAH concentration at the site following site remediation is recommended as such data will probably be required for site closure by the WDNR.

Presently, it appears that the speediest and most cost effective remediation alternative for the three spill sites on the Hughitt Slip property may be over-excavation of the contaminated soil, and disposal by thermal treatment at a local plant. This alternative may be applied to all three sites as long as none of the site's soils are classified as hazardous (to be determined pending a TCLP analysis of the SS1 area soil). Following the excavations of the three areas, confirmation soil samples should be collected from the excavation boundaries and analyzed for diesel range organics and petroleum volatile organic hydrocarbons, with polynuclear aromatic hydrocarbon testing included among the analyses for the SS1 site. The excavations would then be backfilled using "clean" soil. Should the project progress as suggested above, with no soil contamination remaining at the sites and no evidence of groundwater contamination encountered, the three sites would be eligible for Wisconsin Department of Natural Resources (DNR) closure (no further work required).

It should be noted however, that project complications could arise which may require additional efforts and resources in order to achieve DNR site closure. Such complications could include a determination of any of the contaminated soils as hazardous, an indication

of groundwater contamination at any of the sites, or the finding of evidence of additional contamination beyond that associated with the identified spill sites.

If you have any questions regarding the findings of this Phase II investigation, or TPT's recommendations please feel free to contact us at 722-1911.

Sincerely,

Twin Ports Testing, Inc.

Jon Hinkel, Geologist

Brian E. McVean, P.E.
Environmental Department Manager

JH:dk

Attachments:
Property Location Map
Sampling Location Map
Table 1: Field Screening Results
Table 2: Laboratory Analysis Results
Laboratory Report

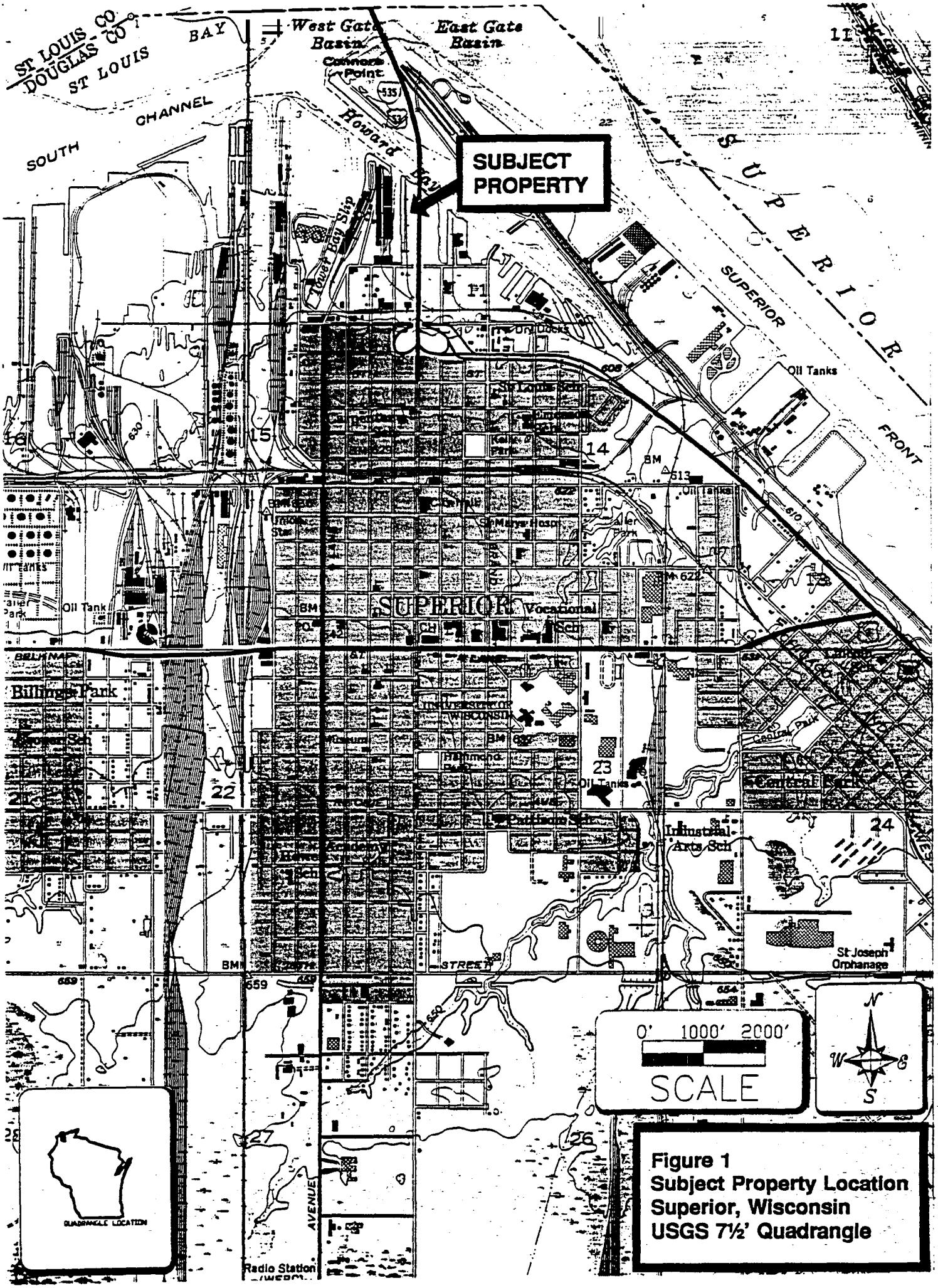


Figure 1
Subject Property Location
Superior, Wisconsin
USGS 7½' Quadrangle

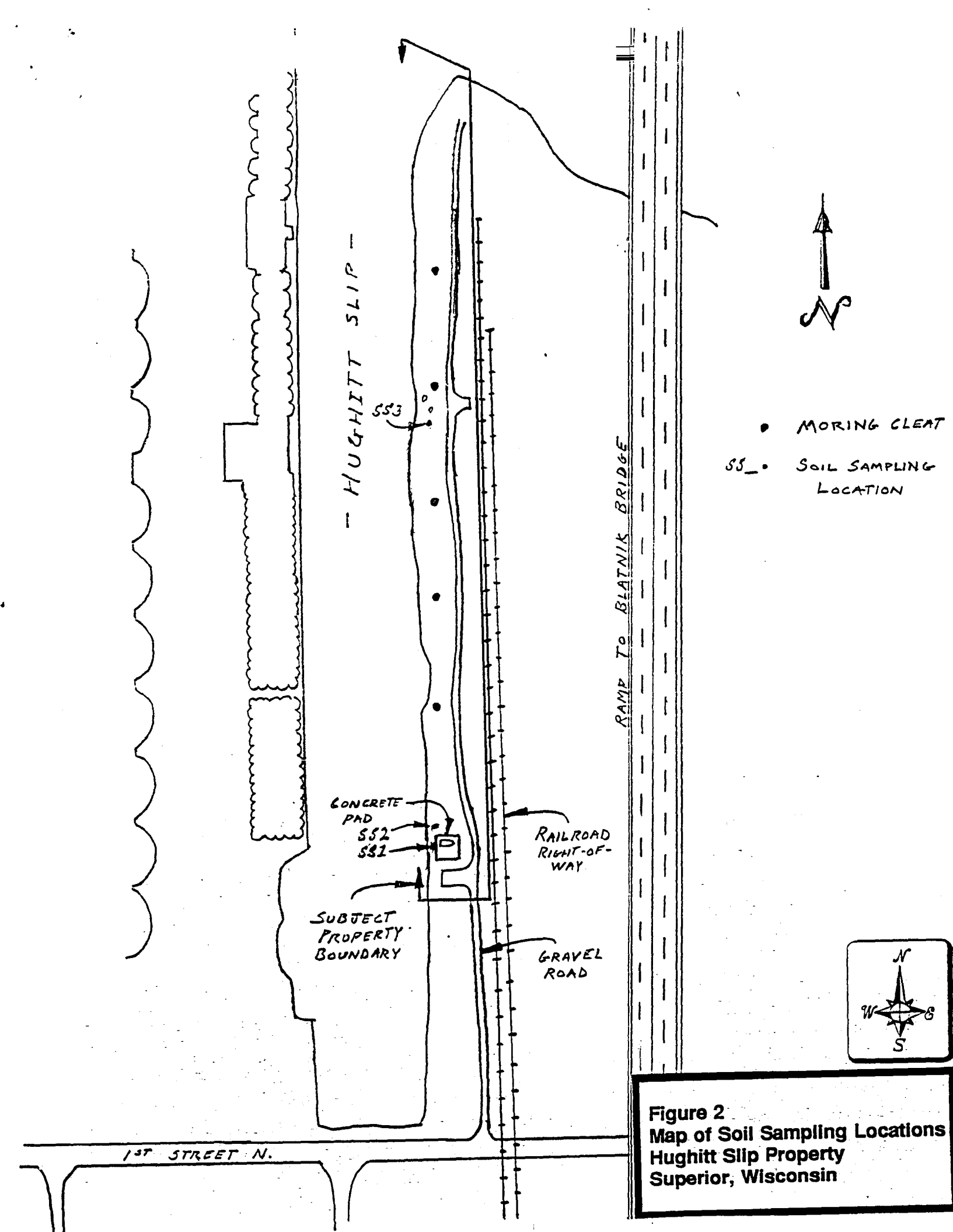


Figure 2
Map of Soil Sampling Locations
Hughitt Slip Property
Superior, Wisconsin

TABLE 1

Field Screening Results
Phase II Soil Sampling
Hughitt Slip Property
Superior, Wisconsin

Sampling Location	Field Screening Sampling Number	PID Reading (ppm)
South Site Adjacent to Concrete Pad	SV-1	51
South Site Approx. 36 ft. North of Concrete Pad	SV-2	0.0
North Site Near Vehicle Turnaround	SV-3	5.0
	SV-4	0.0
	SV-5	0.0

PID = photoionization detector

TABLE 2

Laboratory Analyses Results
Phase II Soil Sampling
Hughit Slip Property
Superior, Wisconsin

Parameter	Soil Sample Number Sampling Location Concentration in ppm			Wisconsin DNR Interim Soil Cleanup Guideline	Concentration Requiring Additional Analyses (TCLP)
	SS1 south site adjacent to concrete pad	SS2 south site approx. 36 ft. north of concrete pad	SS3 north site near vehicle turnaround		
Diesel Range Organics	10,300	45.1	456	100	--
Toluene	0.372	<	<	1.5	--
Xylenes	1.09	0.373	0.386	4.1	--
1,3,5-trimethylbenzene	0.990	<	<	--	--
1,2,4-trimethylbenzene	0.874	<	0.232	--	--
Lead	222	92.9	46.5	--	100
Chromium	16.1	65.1	9.05	--	100

ppm = parts per million, equivalent to milligrams per kilogram, or mg/kg
< = concentration below laboratory method detection limits
-- = guideline not established
TCLP = toxicity characteristics leaching procedure

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 09/07/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13243

Project: Hughitt Slip

Project ID: 552.95E.MM

LAB ID #	SAMPLE ID
3952-95LS	SS1 (1')
3953-95LS	SS2 (1')
3954-95LS	SS3 (1')

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440

Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13243

Project: Hughitt Slip

Project ID: 552.95E.MM

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
DRO	NA	Pass	NA	NA	NA	Pass	Pass
PVOC	NA	Pass	NA	NA	NA	Pass	Pass
PCB'S	Pass	NA	Pass	Pass	NA	NA	NA
INORGANICS	Pass	NA	Fail	Pass	NA	NA	NA

Remarks For Chromium : Duplicate RPD = 41.4%.
For Lead : Duplicate RPD = 56.3%.

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip
Project ID: 552.95E.MM

Collected By: Mark Darby / Mark Udd
Delivered By: Mark Darby

	Chem. Lab ID	3952-95LS	3953-95LS	3954-95LS
	Sample Type	Soil	Soil	Soil
	Collected	08/24/95	08/24/95	08/24/95
	Received	08/24/95	08/24/95	08/24/95
	Reported	09/07/95	09/07/95	09/07/95
	Sample Description	SS1 (1')	SS2 (1')	SS3 (1')
Analysis	Date Analyzed / MDL			
MTBE	08/28/95 0.200 mg/kg	ND	ND	ND
Benzene	08/28/95 0.200 mg/kg	ND	ND	ND
Toluene	08/28/95 0.200 mg/kg	0.372 mg/kg	ND	ND
Ethylbenzene	08/28/95 0.200 mg/kg	ND	ND	ND
Total Xylenes	08/28/95 0.200 mg/kg	1.09 mg/kg	0.373 mg/kg	0.386 mg/kg
1,3,5 Trimethylbenzene	08/28/95 0.200 mg/kg	0.990 mg/kg	ND	ND
1,2,4 Trimethylbenzene	08/28/95 0.200 mg/kg	0.874 mg/kg	ND	0.232 mg/kg
Lead	08/31/95 5.00 mg/kg	222 mg/kg	92.9 mg/kg	46.5 mg/kg
Moisture	08/28/95 1.00 %	15.1 %	22.7 %	30.5 %
Cadmium	09/01/95 1.000 mg/kg	ND	ND	ND
Chromium	09/01/95 5.00 mg/kg	16.1 mg/kg	65.1 mg/kg	9.05 mg/kg
Diesel Range Organics	08/25/95 5.00 mg/kg	10300 mg/kg	45.1 mg/kg	456 mg/kg
PCB's, total	08/25/95 0.024 mg/kg	ND	ND	ND

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

SERIAL NUMBER
№ 13243

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name 552-95E. MAA / HUGHITT SLIP SUPERIOR, WI No._____ P.O.#_____

Client TWIN PORTS TESTING Report To JON HEIKEL

Address 728 GARFIELD AVE TWIN PORTS TESTING

DULUTH, MN 55802 Bill To 552-95E. MAA

Phone (218) 722-1911 Fax _____

Sampler Signature Mark Darby

Sampler (Print) MARK DARBY / MARK UDD

Remarks

RESULTS BY 8/31/95

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	PCBs	Lead	Cadmium	Chromium	PCBs	LSL No.
551 (1')	8/24/95	1:55			X	4	✓	X	X	X	X	X	X	3952
552 (1')	8/24/95	2:10			X	4	✓	X	X	X	X	X	X	3953
553 (1')	8/24/95	2:25			X	4	✓	X	X	X	X	X	X	3954

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
Mark Darby	8/24/95 3:30	[illegible] 8/24/95			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week_____ 2-5 Day_____ or 24 Hour Rush_____ (additional charge)

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hugh H Slip

Client: TPT-E

Date Received: 8/24/95

COC #: 13243

Samples Received By: 44

JNanson

(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	NA	
	a) What temperature did the samples arrive at?	NA	
	b) Are the samples at the proper temperature?	NA	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	NA	

'NO' Items Explained:

SINCE 1972
TWIN PORTS TESTING INC.

1301 NORTH THIRD STREET PERIOR, WISCONSIN 54880
(715) 392-7114 • FAX (715) 392-7163

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
(218) 722-1911 • FAX (218) 722-3295

8 INDUSTRIAL PARK ROAD • NEGAUNEE, MICHIGAN 49866
(906) 226-6653 • FAX (906) 226-3699

November 29, 1995
TPT #561-95E.RA

Wisconsin Department of Natural Resources
P.O. Box 125
Brule, Wisconsin 54820

Attn: Mr. Chris Saari

Re: Preliminary Results - Remedial Action
Hughitt Slip Property
Superior, Wisconsin

Dear Mr. Saari:

Twin Ports Testing, Inc. (TPT) is conducting the clean-up of a series of minor petroleum spill sites on a property located adjacent to the Hughitt Slip in Superior, Wisconsin (Figures 1 and 2). The project has resulted from the investigation of three areas of surficial ground staining identified on the property during a Phase I Environmental Property Assessment conducted in August, 1995. Subsequently, these areas of surficial staining were characterized through a Phase II investigation conducted on August 24, 1995 (see attached Phase II sampling and testing results). This correspondence is intended to bring you up to date on the project's limited Remedial Action results and to provide a basis for additional communications between the Wisconsin Department of Natural Resources (DNR); the property owners, Norman and Donna Camenker; and TPT.

REMEDIAL ACTION RESULTS

Prior to the Remedial Action field work, one soil sample (SS1) was collected by TPT from the Spill Site - 1 location (the most contaminated area of surficial staining) on September 12, 1995, and analyzed for leachable lead using the toxicity characteristics leaching procedure (TCLP). Results of the analysis indicated no detectable leachable lead content in the soil sample.

The project's limited Remedial Action field work commenced on September 26, 1995, and involved the excavation and removal of petroleum contaminated soil from the Hughitt Slip property. Each area of surface staining identified during the Phase II investigation was over-excavated using a backhoe operated by Earth Burners, Inc. (Figure 3). Each area

of excavation extended to a depth of 1½ to 2 feet below surface grade. Groundwater was not encountered in any of the excavations. The excavations were directed by a TPT environmental technician, with soil vapor and laboratory soil samples collected following each excavation. Five soil vapor samples were collected from the base and the four walls of each excavation and field screened for petroleum related organic vapors using a portable photoionization detector (PID). One laboratory soil sample was collected from the base of each excavation and analyzed for diesel range organics (DRO), petroleum volatile organic compounds (PVOC) and lead (Pb).

Following the excavations, the soils were removed from the property and transported to the Lakehead Blacktop and Materials plant in Superior for thermal treatment.

SOIL VAPOR AND CHEMICAL ANALYSIS RESULTS

Results of the soil sample field screening indicated low potentials for petroleum contamination remaining at Excavations 2, 3b and 3c, with PID readings ranging from 0.0 to 3.9 parts per million (ppm; Table 1). Moderate organic vapor concentrations ranging from 4.9 to 71.7 ppm were revealed from soil vapor samples collected from Excavation 1, while moderate to elevated PID readings ranging from 11.3 to 155 ppm were revealed from Excavation 3a.

Results of the soil sample laboratory analyses indicated generally low to nondetectable concentrations of DRO from Excavations 1, 2, 3b and 3c ranging from below method detection limits to 11.8 ppm (Table 2), while an elevated DRO concentration of 4240 ppm was revealed in the Excavation 3a base soil sample. PVOC concentrations were only detected in samples SS3Aa and SS3Ab but had method detection limits of 200 parts per billion (ppb) due to the elevated DRO contaminant concentrations.

COMMENTS

It appears that additional investigation and remedial action work may be required on the property prior to a consideration by the DNR for site closure. Due to the very small sizes of the excavations, modifications to the standard DNR regulations governing remedial actions might be considered. In consideration of these aspects, TPT has delayed further investigation and remedial action work at the property pending project discussion with the DNR.

If you have any questions regarding the project, please feel free to call me at (218) 722-1911. I look forward to hearing from you and discussing various options for proceeding to site closure in as expedient and as cost effective a manner as possible.

Sincerely,

Twin Ports Testing, Inc.

Jon Hinkel, Geologist

Brian E. McVean, P.E.
Environmental Department Manager

cc: Norman and Donna Camenker

Attachments:

Figure 1: Subject Property Location
Figure 2: Site Map
Figure 3: Site Map Showing Sampling Location Details
Table 1: Field Screening Results
Table 2: Laboratory Analysis Results
Laboratory Reports
Phase II Sampling and Testing Results Report

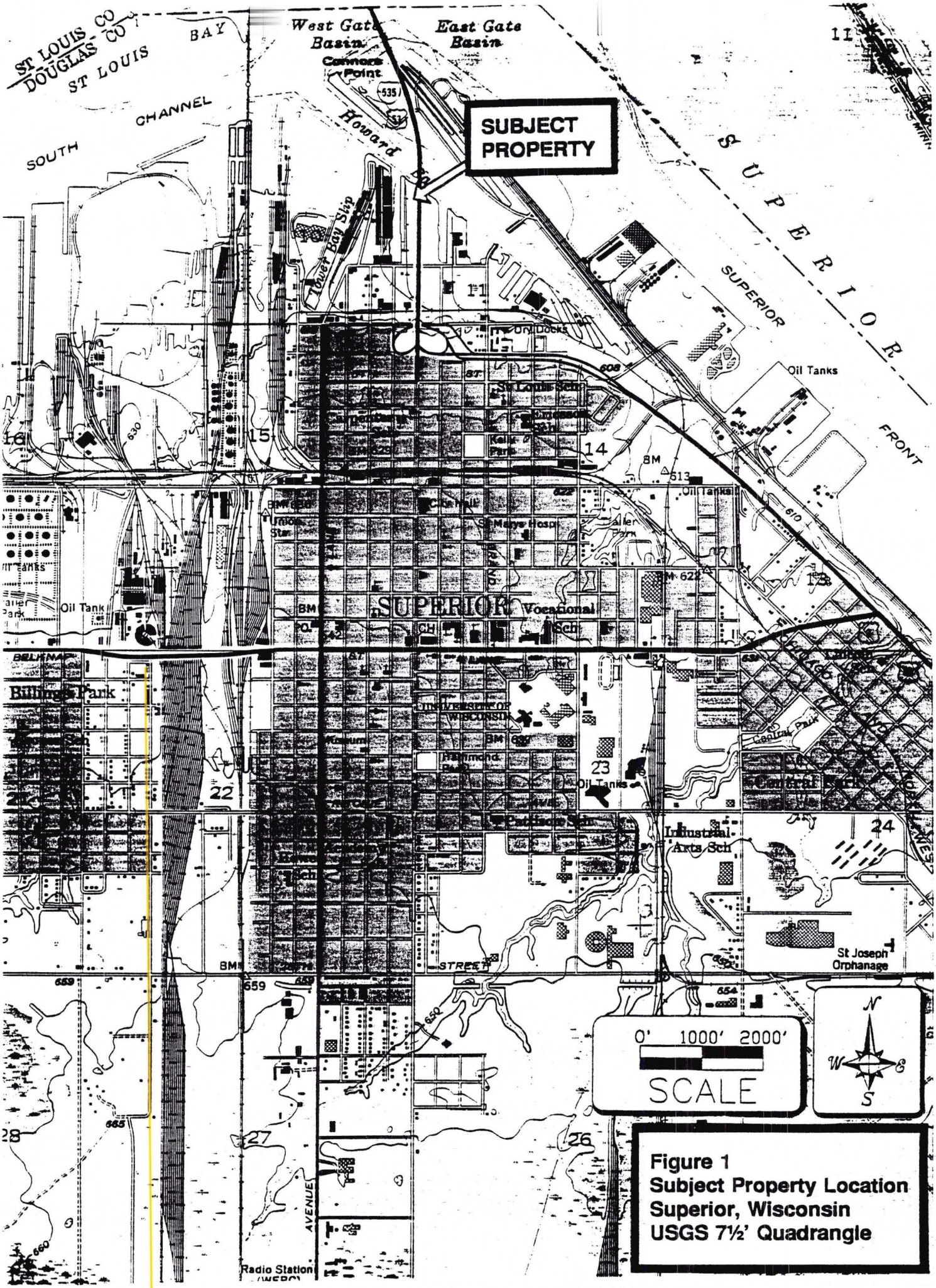


Figure 1
Subject Property Location
Superior, Wisconsin
USGS 7½' Quadrangle

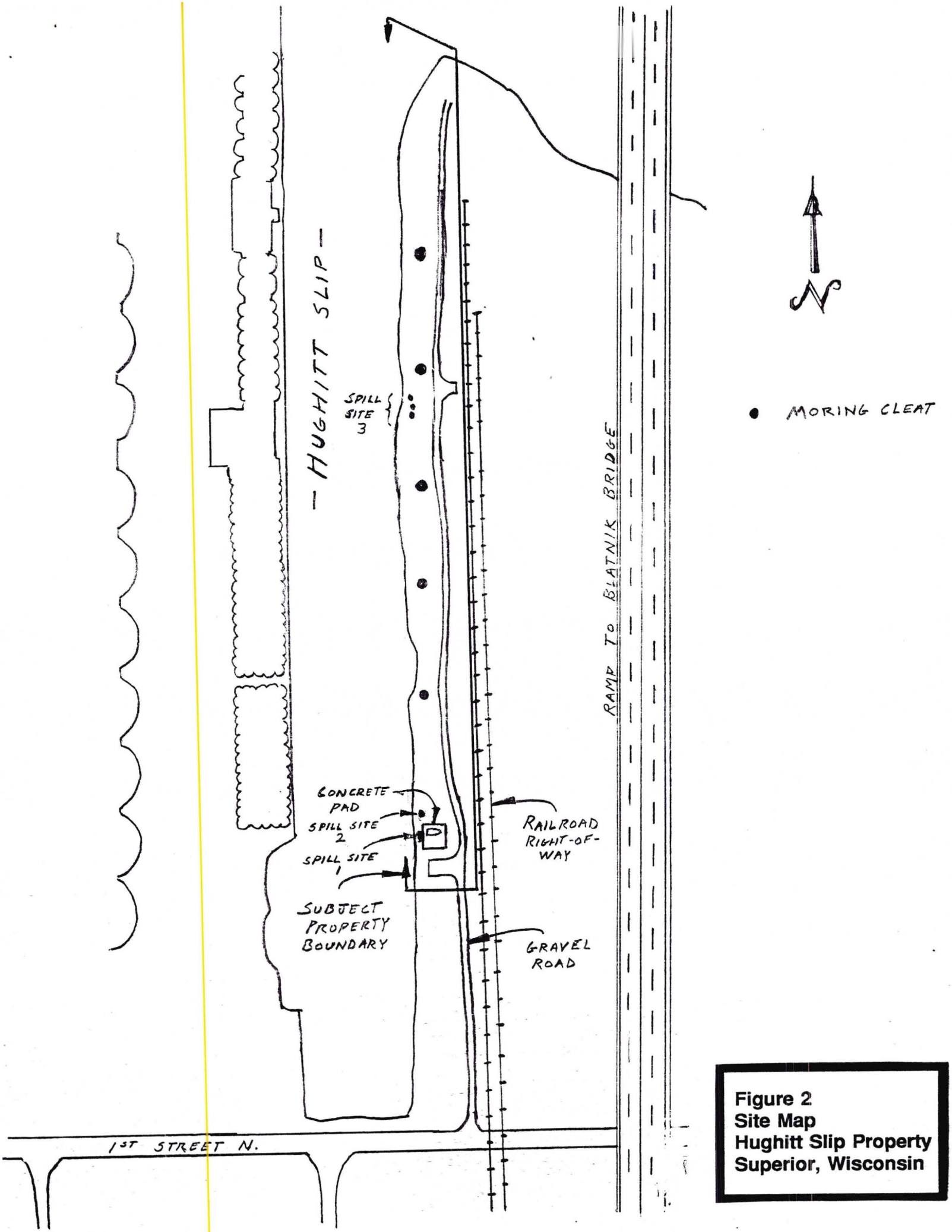


Figure 2
Site Map
Hughitt Slip Property
Superior, Wisconsin

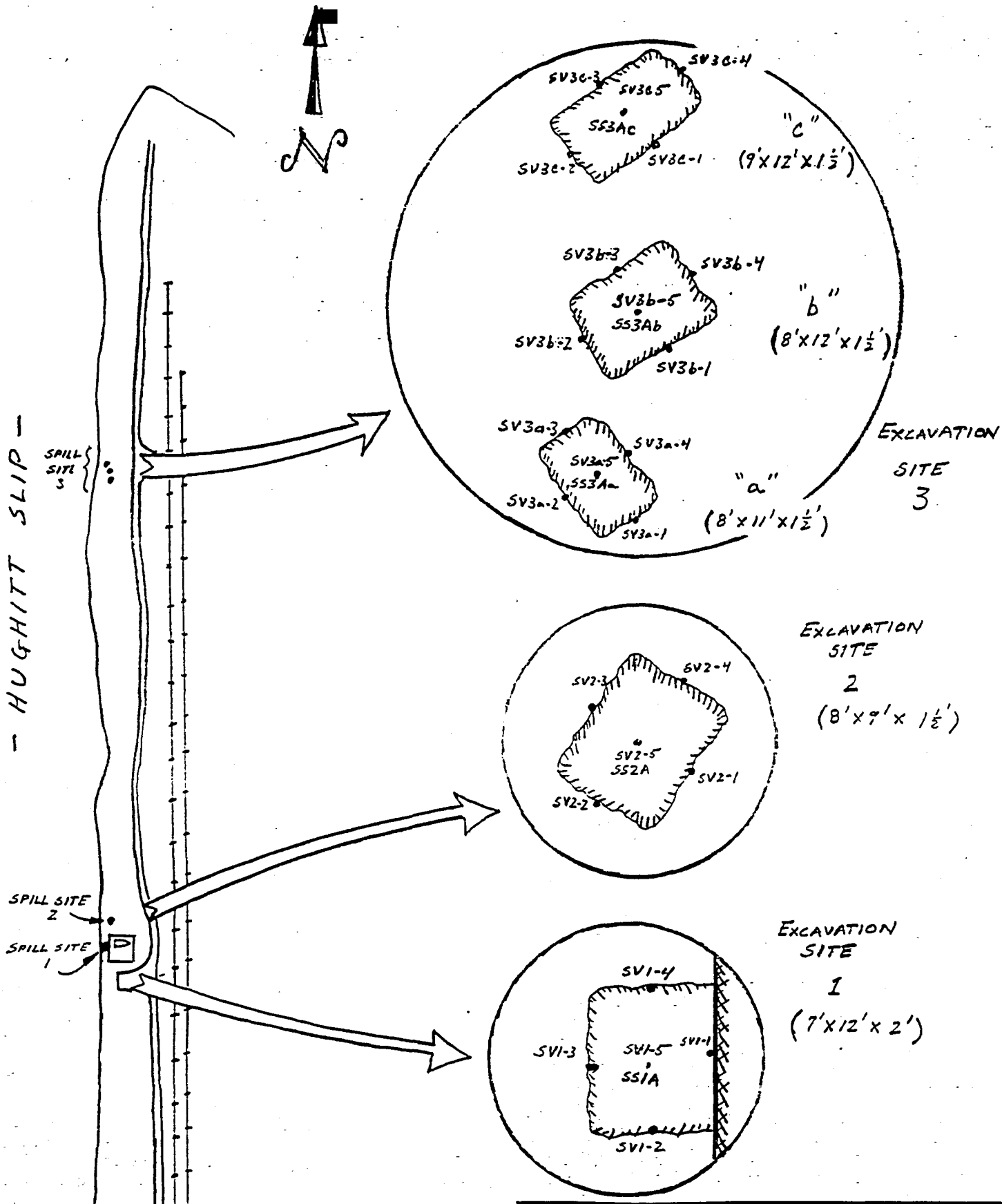


Figure 3
Site Map Showing Sampling Location Details
Hughitt Slip Property
Superior, Wisconsin

TABLE 1
Field Screening Results
Hughitt Slip Property Excavations
Superior, Wisconsin
September, 1995 561-95E.RA

Location	Sample Number	Organic Vapor Concentration (ppm)
Excavation adjacent to concrete pad. 1	SV1-1	31.5
	SV1-2	67.0
	SV1-3	71.7
	SV1-4	12.8
	SV1-5	4.9
Excavation 36 feet north of concrete pad. 2	SV2-1	0.0
	SV2-2	0.0
	SV2-3	0.0
	SV2-4	0.0
	SV2-5	0.0
Southern excavation near vehicle turnaround. 3a	SV3a-1	11.3
	SV3a-2	96.2
	SV3a-3	127
	SV3a-4	134
	SV3a-5	155
Central excavation near vehicle vehicle turnaround. 3b	SV3b-1	3.3
	SV3b-2	2.7
	SV3b-3	2.4
	SV3b-4	2.1
	SV3b-5	3.9
Northern excavating near vehicle turnaround 3c	SV3c-1	3.3
	SV3c-2	1.8
	SV3c-3	1.8
	SV3c-4	1.5
	SV3c-5	1.5

Note: * Organic vapor concentrations provided in parts per million (ppm)
* All soil vapor samples were collected at the excavation bases, 1½ to 2½ feet below the surface.

TABLE 2
Laboratory Analysis Results
Hughitt Slip Property Excavations
Superior, Wisconsin
September, 1995 561-95E.RA

		Parameter, concentration (ppm)									
Location	Soil Sample Number	DRO	Benzene	Toluene	Ethylbenzene	Xylenes	1,3,5-TMB	1,2,4-TMB	MTBE	Lead	Lead (TCLP)
Excavation adjacent to concrete pad 1	SS1	--	--	--	--	--	--	--	--	--	<
	SS1A	5.10	<	<	<	<	<	<	<	<	--
Excavation 36 ft. north of concrete pad 2	SS2A	<	<	<	<	<	<	<	<	<	--
Southern Excavation near vehicle turnaround 3a	SS3Aa	4240	<	0.765	0.238	2.51	1.31	8.41	<	254	--
Central Excavation near vehicle turnaround 3b	SS3Ab	11.8	<	0.219	<	<	<	<	<	257	--
Northern Excavation near vehicle turnaround 3c	SS3Ac	8.26	<	<	<	<	<	<	<	160	--
Wisconsin DNR Interim Soil Cleanup Guideline/Maximum Allowable Leachable Metal Concentration		100	0.0055	1.5	2.9	4.1	--	--	--	--	5

DRO - diesel range organics
TMB - trimethylbenzene
MTBE - methyl tertiary butyl ether
-- - analysis not conducted/guideline not established
TCLP - toxicity charateristics leaching procedure (of laboratory analysis)
ppm - parts per million, equivalent to milligrams per kilogram or mg/kg
< - concentration below laboratory method detection limits

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 10/11/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

LAB ID #	SAMPLE ID
4392-95LS	SS1A
4393-95LS	SS2A
4394-95LS	SS3Aa
4395-95LS	SS3Ab
4396-95LS	SS3Ac

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440

Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13367

Project: Hughitt Slip Property

Project ID: 561-95E.RA

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
DRO	NA	Pass	NA	NA	NA	Pass	Pass
BTEX/PVOC	NA	Pass	NA	NA	NA	Pass	Pass
INORGANICS	Pass	NA	NA	Pass	NA	NA	NA

Remarks

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

	Chem. Lab ID	4392-95LS	4393-95LS	4394-95LS
	Sample Type	Soil	Soil	Soil
	Collected	09/26/95	09/26/95	09/26/95
	Received	09/28/95	09/28/95	09/28/95
	Reported	10/11/95	10/11/95	10/11/95
	Sample Description	SS1A	SS2A	SS3Aa
Analysis	**Date Analyzed** / **MDL**			
MTBE	10/04/95 / 0.200 mg/kg	ND α	ND	ND
Benzene	10/04/95 / 0.200 mg/kg	ND α	ND	ND
Toluene	10/04/95 / 0.200 mg/kg	ND α	ND	0.765 mg/kg
Ethylbenzene	10/04/95 / 0.200 mg/kg	ND α	ND	0.238 mg/kg
Total Xylenes	10/04/95 / 0.200 mg/kg	ND α	ND	2.51 mg/kg
1,3,5 Trimethylbenzene	10/04/95 / 0.200 mg/kg	ND α	ND	1.31 mg/kg
1,2,4 Trimethylbenzene	10/04/95 / 0.200 mg/kg	ND α	ND	8.41 mg/kg
Lead	10/11/95 / 10.0 mg/kg	ND	ND	254 mg/kg
Moisture	10/04/95 / 1.00 %	17.8 %	19.0 %	24.4 %
Diesel Range Organics	09/29/95 / 5.00 mg/kg	5.10 mg/kg	ND	4240 mg/kg α

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

α ⇒ Analyzed On 10/03/95

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip Property
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Analysis	Date Analyzed	MDL	Chem. Lab ID: 4395-95LS	Chem. Lab ID: 4396-95LS
			Sample Type: Soil	Sample Type: Soil
			Collected: 09/26/95	Collected: 09/26/95
			Received: 09/28/95	Received: 09/28/95
			Reported: 10/11/95	Reported: 10/11/95
			Sample Description: SS3Ab	Sample Description: SS3Ac
MTBE	10/04/95	0.200 mg/kg	ND	ND
Benzene	10/04/95	0.200 mg/kg	ND	ND
Toluene	10/04/95	0.200 mg/kg	0.219 mg/kg	ND
Ethylbenzene	10/04/95	0.200 mg/kg	ND	ND
Total Xylenes	10/04/95	0.200 mg/kg	ND	ND
1,3,5 Trimethylbenzene	10/04/95	0.200 mg/kg	ND	ND
1,2,4 Trimethylbenzene	10/04/95	0.200 mg/kg	ND	ND
Lead	10/11/95	10.0 mg/kg	257 mg/kg	160 mg/kg
Moisture	10/04/95	1.00 %	28.2 %	27.3 %
Diesel Range Organics	09/29/95	5.00 mg/kg	11.8 mg/kg α	8.26 mg/kg

Remarks

MDL $\Rightarrow$ Method Detection Limit
ND $\Rightarrow$ Not Detected at or above MDL

$\alpha \Rightarrow$ Analyzed On 10/03/95

SERIAL NUMBER
№ 13367

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

TPT # 561-95E-RA

Project Name Hughitt Slip Property No. _____ P.O.# _____

Client Norman & Donna Camenker Report To Jon Hinkel

Address _____

Bill To 561-95E-RA

Phone _____ Fax _____

Remarks

Sampler Signature R J Hinkel

Sampler (Print) R. J. Hinkel

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Analyses: PVOC	Analyses: Pb	LSL No.
SS1A	9/26/95	3:50 pm			✓	3		✓	✓	✓	4392
SS2A	9/26/95	4:20 pm			✓	3		✓	✓	✓	4393
SS3Aa	9/26/95	5:00 pm			✓	3		✓	✓	✓	4394
SS3Ab	9/26/95	5:10 pm			✓	3		✓	✓	✓	4395
SS3Ac	9/26/95	5:20 pm			✓	3		✓	✓	✓	4396

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R J Hinkel	9/28/95 4:05pm	Carolyn Krueger			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week ✓ 2-5 Day _____ or 24 Hour Rush _____ (additional charge)

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hughitt Slip Property

Client: TPT

Date Received: 9-28-95

COC #: 13367

Samples Received By: CKV

Carolyn J. Kuras
(Signature)

	Question	Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	✓	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	✓	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	✓	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	✓	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	✓	
6.	Did the samples arrive on ice?	✓	
	a) What temperature did the samples arrive at? ______		
	b) Are the samples at the proper temperature?	✓	
7.	Is there enough sample to do all the analyses?	✓	
8.	Are the samples preserved correctly?	✓	
9.	Are the VOA vials head-space free?	NA	

'NO' Items Explained:

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 09/18/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13282

Project: Hughitt Slip

Project ID: 561-95E.RA

LAB ID #	SAMPLE ID
4173-95LS	SS1

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440 Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13282

Project: Hughitt Slip

Project ID: 561-95E.RA

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
INORGANICS	Pass	NA	Pass	Pass	NA	NA	NA

Remarks

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip
Project ID: 561-95E.RA

Collected By: R.J. Hinkel
Delivered By: R.J. Hinkel

Chem. Lab ID	4173-95LS		
Sample Type	Soil		
Collected	09/12/95		
Received	09/12/95		
Reported	09/18/95		
Sample Description	SS1		

Analysis	Date Analyzed	MDL			
TCLP Lead	09/18/95	0.250 mg/l	ND		

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

SERIAL NUMBER
№ 13282

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

561-95E. RA

Project Name Hughitt Slip Property Clean-Up No._____ P.O.#_____

TPW Client Mrs. Donna Camenker Report To Jon Hinkel

Address 70 Highgate Road

Superior, Wisc. Bill To 561-95E.RA

Phone 392-5457 Fax _____

Sampler Signature R J Hinkel

Sampler (Print) R J Hinkel

Remarks One ⅔ liter soil sample collected from the SS1 location on the Hughitt Slip property in Superior, Wisconsin. Analysis by Lake Superior Laboratories

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: Lead: TCLP	LSL No.
SS1	9/12/95	2:10 pm			✓	1	None		4173

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
R. J. Hinkel 9/12/95	2:30 pm	[signature] 9/12/95			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week_____ 2-5 Day ✓ or 24 Hour Rush_____ (additional charge)

LAKE SUPERIOR LABORATORIES

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hughitt Slip

Client: TPT-E

Date Received: 9/12/95

COC #: 13282

Samples Received By: LH

L Hanson
(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	NA	
	a) What temperature did the samples arrive at?	NA	
	b) Are the samples at the proper temperature?	NA	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	NA	

'NO' Items Explained:

Kimmes
02-16-000170
DNR
Closed

APPLICATION TO TREAT OR DISPOSE OF PETROLEUM CONTAMINATED SOIL
ASPHALT PLANT OR OTHER TYPE OF THERMAL TREATMENT UNIT

Form 4400-149

This form is required by the Department of Natural Resources for leaking underground storage tank sites to ensure that petroleum contaminated soil is treated or disposed o;f in compliance with NR 500-540, NR 158, and NR 419, Wis. Adm. Code. Failure to comply with applicable statutes and administrative rules may lead to violations of subchapters III and IV of ch. 144 Wis. Stats. and may result in forfeitures of not less than $10 or more than $25,000 for each violation, pursuant to ss. 144.426(1), 144.74 (1), and 144.99, Wis. Stats., or fines of not less than $100 or more than $150,000 or imprisonment for not more than 10 years, or both, pursuant to s. 144.74 (2), Wis. Stats. Each day of a continuing violation constitutes a separate violation. Department approval of this form is required prior to site remediation, except for soils to be buried in landfills.

DIRECTIONS: 1) Complete parts I and II. 2) Submit the application to the DNR project manager for approval. 3) Have the treatment facility complete part III of the approved form after the soil has been treated. 4) Return the ORIGINAL form to the DNR project manager. 5) Keep a copy for your files.

ALL SITES MUST COMPLETE PART I.

Part I. Source of Soil

Site/Facility Name: Hughitt Slip Property

Site I.D. # (for DNR use only):

Site Address: (no street address; see attached map)

Contact Name: Norman & Donna Camenker

City, State, Zip Code: Superior, Wisconsin 54880

1/4, 1/4, Section, Township, and Range: NE¼, SE¼ Sec. 10, T49N, R14W

The information on this form is accurate to the best of my knowledge.

Signature of Soil Generator: X Donna Camenker

Telephone Number (include area code): (715) 392-5457

Consulting Firm	Contact	Telephone Number
Twin Ports Testing, Inc.	Jon Hinkel	(218) 722-1911

Estimated Volume Contaminated Soil

18 Tons/cubic yards (circle one)

Type of Petroleum Contamination (Circle):

Gasoline Diesel Fuel/#2 Fuel Oil

Other Waste Oil

Soil Type (USCS)

- ___ sand (SP, SW)
- ✓ silty/clayey sands (SM, SC)
- ___ silt (ML, MH, OL)
- ___ clay (Cl, CH, OH)
- ✓ gravel (GC, GM, GP, GW)
- ___ peat (PT)

} fill material, mixture of soils

Distance to Nearest Residence/Business 800 ft.

Contaminant concentration:

One screened sample for each 15 yds³ and one laboratory analysis for each 300 yds³ of contaminated soil when the field instrument *registers contamination* OR one laboratory analysis for each 100 yds³ when the field instrument *does not register contamination* on soil shown to be contaminated during the site investigation/excavation or stockpiling. PLEASE ATTACH A TABLE LISTING RESULTS OF BOTH FIELD SCREENING AND LAB ANALYSES, AND INCLUDE SUPPORTING LAB REPORTS, IN ADDITION TO THE TPH AND BENZENE INFORMATION REQUESTED BELOW. NOTE: DILHR requires a minimum of 3 laboratory samples on excavated soil for PECFA claims.

Total Benzene in soil to be remediated (attach calculations) < 0.010 lbs

Total Petroleum Hydrocarbons(TPH) in soil to be remediated (attach calculations) 519 lbs

Total TPH as diesel range organics

ATTACH EMISSIONS CALCULATIONS

(a/1,000,000) x (2,800 lbs/yd^3) x b = benzene emission in lbs., where a = benzene concentration of soil sample in ppm or mg/kg dry weight basis, and b = amount of contaminated soil in yds^3. NOTE: This calculation can also be used to estimate TPH emissions by substituting TPH concentration (ppm or mg/kg) for "a". It may also be used to calculate VOCs.

Part II: Proposed Treatment Facility

Name of Plant: Lakehead Blacktop & Mtls.

Plant number and Model: Madson 4000 lb. Batch Plant

Contact: Mr. Joe Kimmes

DNR Facility I.D. No.: 816037640

Address: 6327 Tower Ave.
(or location of portable plant) Superior, WI 54880

Distance to Nearest Residence/Business: 5000 ft.

LEAVE BLANK - DEPARTMENT OF NATURAL RESOURCES USE ONLY

Application Concurrence:

Air Management: Phyllis Holmbeck Date: 9/22/95

Project Manager: _____ Date: _____

Comments:

THIS SECTION TO BE COMPLETED BY THE ASPHALT/THERMAL UNIT PROCESSING THE CONTAMINATED SOIL
AFTER PROCESSING IS COMPLETED

Part III

WDNR Air Pollution Control Permit Number: _____

Actual Volume of Soil Treated (tons/cubic yards): 16 yds

Date of transport to plant: September 26, 1995

Date of treatment: November 8, 1995

Transporter Name: Earth Movers of Duluth

Transporter License Number: N/A

Circle One: (Roasted and Incorporated) Roasted Only

Total Benzene emissions in pounds for this batch (apply 50% destruction factor if no after burner is used): 99% Factor w/afterburner 0.0001 Lbs

Benzene emissions to date for this plant (including this batch) for this calendar year: 2.4289 Lbs

Signature of Treatment plant representative: Roland E. Pollema

Telephone Number at Plant: 715-392-1989

POST BURN SAMPLE RESULTS: COMPLETE ONLY FOR SOILS NOT INCORPORATED!

(One representative sample for each 100 cubic yards-not composites)

Sample Number				
TPH				

DNR APPROVAL IS REQUIRED BEFORE USING AS COMMON FILL.

Date of backfilling or use as common fill: _____ Location of fill site ____1/4____1/4____S____T____R

TOTAL BENZENE CALCULATION:

$$\left(\frac{< 0.2 \text{ mg/kg}}{1{,}000{,}000}\right) \times \left(\frac{2{,}800 \text{ lbs.}}{1 \text{ cu yrd}}\right) \times (18 \text{ cu yrds}) = < 0.010 \text{ lbs. benzene}$$

~~Det. level~~

$\frac{0.2}{1{,}000{,}000} \times 2800 \times 16 \text{ yds} = 0.0090 \text{ Lbs}$

99% Factor w/afterburner = 0.0001 Lbs

TOTAL PETROLEUM HYDROCARBONS CALCULATION:

$$\left(\frac{10{,}300 \text{ mg/kg}}{1{,}000{,}000}\right) \times \left(\frac{2{,}800 \text{ lbs.}}{1 \text{ cu yrd}}\right) \times (18 \text{ cu yrds}) = 519 \text{ lbs. TPH}$$

Feed rate Calc.

@ 98% dist.

$$x \text{ tons/hr} = \frac{(9 \text{ lb/hr}) * (1.4 \text{ ton/yd}^3) * 18 \text{ yd}^3}{515 \text{ lb DRO} * (1 - 0.98)}$$

$$= 21.85 \text{ yd}^3/\text{hr.}$$

TWIN PORTS TESTING, inc.
SINCE 1972
1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
FAX # (715) 392-7163 • (715) 392-7114

TRANSMITTAL

To: Steve La Valley
Wisconsin DNR
1705 Tower Avenue
Superior, WI 54880

Date: Sep. 12, 1995
Job #: 552-95E.MM
Client: Mrs. Donna Camenker
Project: Hughitt Slip Property

We are sending you:
- ✓ Enclosed
- ___ Separate Cover
- ___ By our Messenger
- ___ By your Messenger
- ___ Airmail
- ✓ 1st Class
- ___ Other
- ___ Shop Drawings
- ___ Other Drawings
- ___ Specifications
- ___ Other

# OF COPIES	REPORT/PROPOSAL ID	LATEST DATE	DESCRIPTION OR REMARKS
(1)	Phase II	report	

THESE ARE TRANSMITTED as checked below:

- For approval ☑
- For your use ☑
- As requested ☐
- For review & comment ☐
- No Exception Taken ☐
- Make corrections noted ☐
- Revise & resubmit ☐
- Submit specified item ☐

Remarks: Dear Steve,
We are proceeding with the cleanup of the Hughitt Slip property as authorized by our client. Our work plan is following the suggestions indicated in the Remarks section of the enclosed report. If you have any questions or comments, please feel free to contact me any time.

COPIES TO:	Encl.	Trans.
Mrs. Donna Camenker		

Sincerely,

Jon Hinkel
(218) 722-1911

SINCE 1972

TWIN PORTS TESTING INC.

1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
(715) 392-7114 • FAX (715) 392-7118

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
(218) 722-1911 • FAX (218) 722-3295

8 INDUSTRIAL PARK ROAD • NEGAUNEE, MICHIGAN 49866
(906) 226-6653 • FAX (906) 226-3699

September 12, 1995
TPT # 552-95E.MM

Mrs. Donna Camenker
70 Highgate Road
Superior, Wisconsin 54880
Phone: (715) 392-5457

Re: Phase II Sampling and Testing Results
Hughitt Slip Property
Superior, Wisconsin

Dear Mrs. Camenker:

Twin Ports Testing, Inc. (TPT) is pleased to provide the following results of the Phase II soil sampling and testing investigation conducted at the Hughitt Slip property (Lots 1-9, Block 3, of the West Superior 8th Division) in Superior, Wisconsin (Figure 1). The Phase II investigation followed from recommendations listed in a Phase I Environmental Property Assessment completed for the property in August, 1995 (TPT # 539-95E.PI) and was conducted according to the Work Plan outlined in TPT Proposal # 95P-115E.

METHODS

Field work of the Phase II investigation was conducted August 24, 1995. Soil samples were collected by TPT environmental technicians from the three areas of ground staining identified on the Hughitt Slip property in the Phase I report (Figure 2). The soil samples were collected at approximately one foot deep each using hand spades, and screened in the field for petroleum related organic vapors using a portable photoionization detector (PID). As the northern-most area of ground staining exhibited a series of more widely spaced stains, soil samples were collected and screened from three ponts in the area. Results of the field screening revealed organic vapor concentrations ranging from 0.0 to 51 parts per million (ppm) throughout the sample suite (Table 1).

Laboratory samples were analyzed from each of the three separate areas of ground staining for diesel range organics (DRO); petroleum volatile organic compounds (PVOC); lead, cadmium and chromium (Pb, Cd, Cr); and polychlorinated biphenyls (PCB).

RESULTS

Results of the analyses revealed moderate to high concentrations of diesel range organics (45.1-10,300 ppm); various minor detections of several specific petroleum related compounds; minor to moderate concentrations of chromium (9.05 - 6.51 ppm); and moderate to moderately high concentrations of lead (46.5 - 222 ppm). No cadmium or polychlorinated biphenyl concentrations were detected within the sample suite (Table 2).

REMARKS

In consideration of the elevated concentration of lead indicated in the SS1 soil sample, an additional lead analysis involving toxicity characteristics leaching procedure (TCLP) is recommended for the SS1 sampling area. Should results of the TCLP analysis indicate a leachable lead concentration above 5 ppm, soil from that area will be classified as hazardous waste and must be disposed of accordingly. Assuming the concentration of leachable lead is found to lie below 5 ppm, soil from that area may be considered as nonhazardous, and may be disposed of by conventional means, such as thermal treatment.

In consideration of the high concentration of diesel range organics, but low concentrations of petroleum volatile organic compounds in the area of SS1, a potential exists for significant concentrations of polynuclear aromatic hydrocarbons (PAH) to be present at the site also. Testing for PAH concentration at the site following site remediation is recommended as such data will probably be required for site closure by the WDNR.

Presently, it appears that the speediest and most cost effective remediation alternative for the three spill sites on the Hughitt Slip property may be over-excavation of the contaminated soil, and disposal by thermal treatment at a local plant. This alternative may be applied to all three sites as long as none of the site's soils are classified as hazardous (to be determined pending a TCLP analysis of the SS1 area soil). Following the excavations of the three areas, confirmation soil samples should be collected from the excavation boundaries and analyzed for diesel range organics and petroleum volatile organic hydrocarbons, with polynuclear aromatic hydrocarbon testing included among the analyses for the SS1 site. The excavations would then be backfilled using "clean" soil. Should the project progress as suggested above, with no soil contamination remaining at the sites and no evidence of groundwater contamination encountered, the three sites would be eligible for Wisconsin Department of Natural Resources (DNR) closure (no further work required).

It should be noted however, that project complications could arise which may require additional efforts and resources in order to achieve DNR site closure. Such complications could include a determination of any of the contaminated soils as hazardous, an indication

of groundwater contamination at any of the sites, or the finding of evidence of additional contamination beyond that associated with the identified spill sites.

If you have any questions regarding the findings of this Phase II investigation, or TPT's recommendations please feel free to contact us at 722-1911.

Sincerely,

Twin Ports Testing, Inc.

Jon Hinkel, Geologist

Brian E. McVean, P.E.
Environmental Department Manager

JH:dk

Attachments:
Property Location Map
Sampling Location Map
Table 1: Field Screening Results
Table 2: Laboratory Analysis Results
Laboratory Report

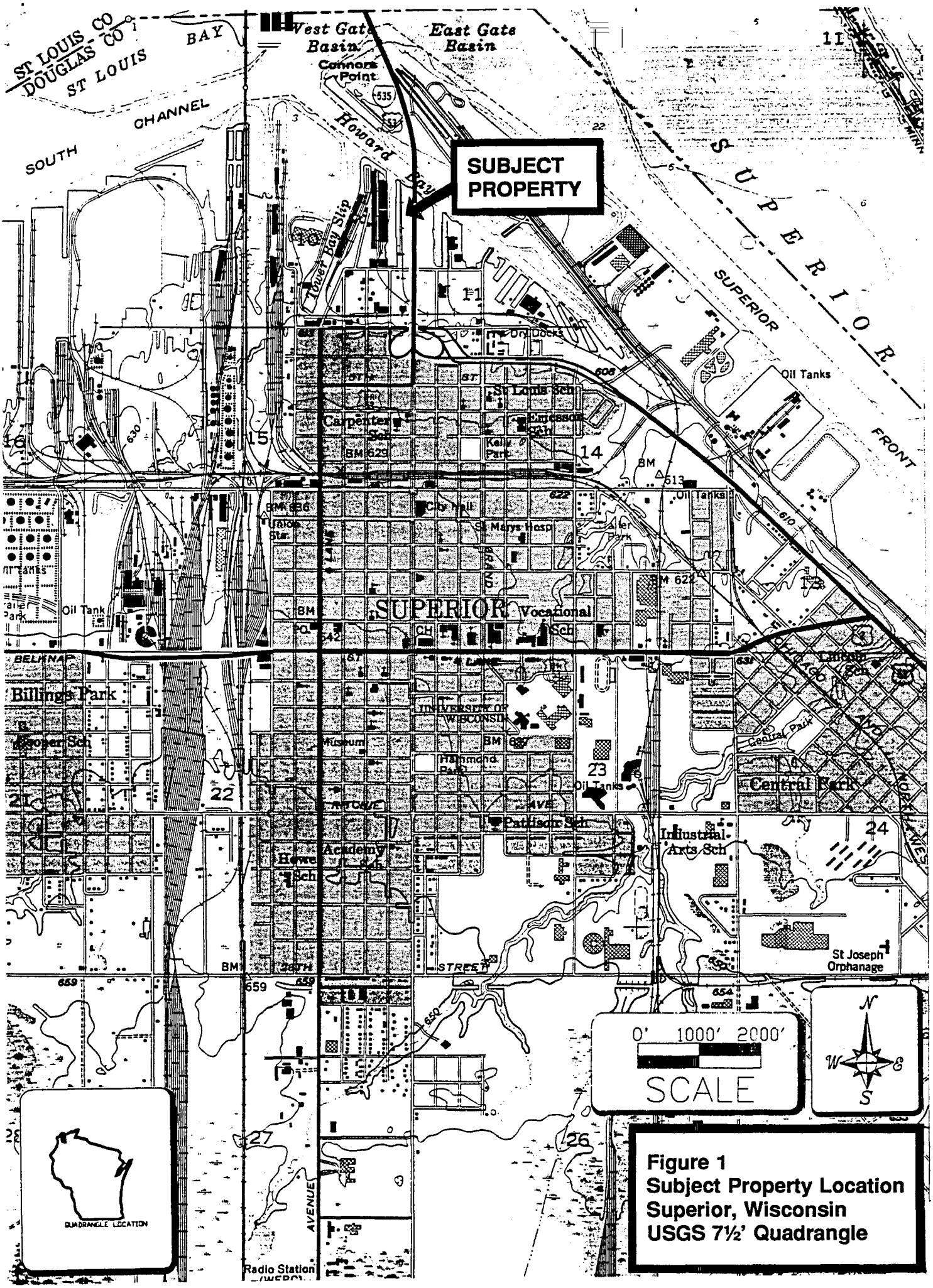


Figure 1
Subject Property Location
Superior, Wisconsin
USGS 7½' Quadrangle

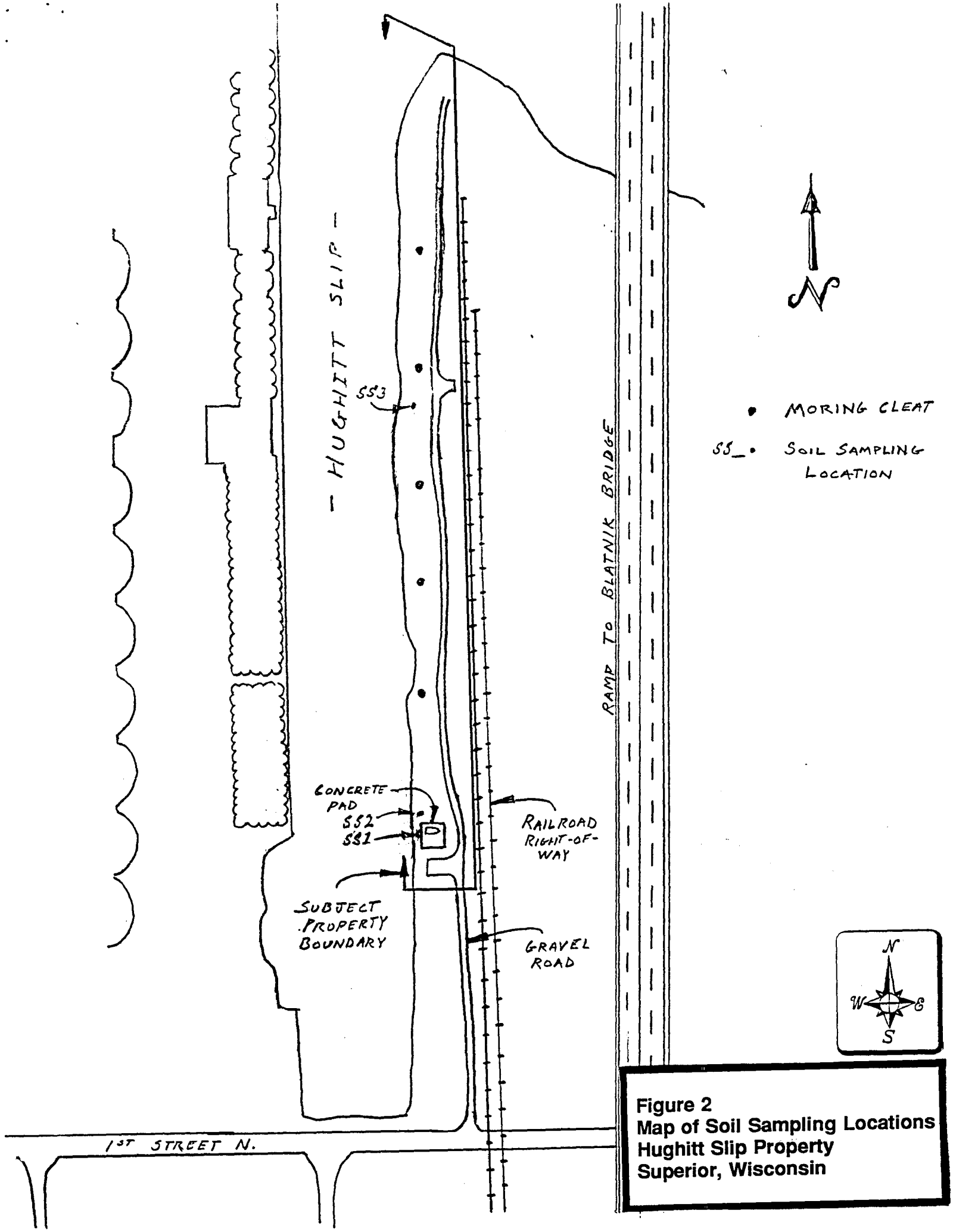


Figure 2
Map of Soil Sampling Locations
Hughitt Slip Property
Superior, Wisconsin

TABLE 1

Field Screening Results
Phase II Soil Sampling
Hughitt Slip Property
Superior, Wisconsin

Sampling Location	Field Screening Sampling Number	PID Reading (ppm)
South Site Adjacent to Concrete Pad	SV-1	51
South Site Approx. 36 ft. North of Concrete Pad	SV-2	0.0
North Site Near Vehicle Turnaround	SV-3	5.0
	SV-4	0.0
	SV-5	0.0

PID = photoionization detector

TABLE 2

Laboratory Analyses Results
Phase II Soil Sampling
Hughit Slip Property
Superior, Wisconsin

Parameter	Soil Sample Number Sampling Location Concentration in ppm			Wisconsin DNR Interim Soil Cleanup Guideline	Concentration Requiring Additional Analyses (TCLP)
	SS1 south site adjacent to concrete pad	SS2 south site approx. 36 ft. north of concrete pad	SS3 north site near vehicle turnaround		
Diesel Range Organics	10,300	45.1	456	100	--
Toluene	0.372	<	<	1.5	--
Xylenes	1.09	0.373	0.386	4.1	--
1,3,5-trimethylbenzene	0.990	<	<	--	--
1,2,4-trimethylbenzene	0.874	<	0.232	--	--
Lead	222	92.9	46.5	--	100
Chromium	16.1	65.1	9.05	--	100

ppm = parts per million, equivalent to milligrams per kilogram, or mg/kg
< = concentration below laboratory method detection limits
-- = guideline not established
TCLP = toxicity characteristics leaching procedure

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE ■ DULUTH, MINNESOTA 55802
MN (218) 722-1911 ■ FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

Date: 09/07/95

Client: Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Attn: Jon Hinkel

Phone: (218) 722-1911

Fax: (218) 722-3295

Chain of Custody #: 13243

Project: Hughitt Slip

Project ID: 552.95E.MM

LAB ID #	SAMPLE ID
3952-95LS	SS1 (1')
3953-95LS	SS2 (1')
3954-95LS	SS3 (1')

Signature Timothy A. Buck

Linda Thiry, Director
Tim Buck, Lab Manager

Wis. Certification Number: 816057440

Minn. Certification Number: 027-137-307

This cover page is the first of _____ pages

Quality Assurance / Quality Control Report

Client: Twin Ports Testing

Chain Of Custody #: 13243

Project: Hughitt Slip

Project ID: 552.95E.MM

QC Parameter	Blank	Soil Blank	Duplicate	Spike	Spike Duplicate	Soil Spike	Soil Spike Duplicate
DRO	NA	Pass	NA	NA	NA	Pass	Pass
PVOC	NA	Pass	NA	NA	NA	Pass	Pass
PCB'S	Pass	NA	Pass	Pass	NA	NA	NA
INORGANICS	Pass	NA	Fail	Pass	NA	NA	NA

Remarks For Chromium : Duplicate RPD = 41.4%.
For Lead : Duplicate RPD = 56.3%.

LABORATORY ANALYSIS REPORT

Client
Twin Ports Testing
Environmental Dept.
728 Garfield Avenue
Duluth, MN 55802

Project: Hughitt Slip
Project ID: 552.95E.MM

Collected By: Mark Darby / Mark Udd
Delivered By: Mark Darby

Chem. Lab ID	3952-95LS	3953-95LS	3954-95LS
Sample Type	Soil	Soil	Soil
Collected	08/24/95	08/24/95	08/24/95
Received	08/24/95	08/24/95	08/24/95
Reported	09/07/95	09/07/95	09/07/95
Sample Description	SS1 (1')	SS2 (1')	SS3 (1')

Analysis	Date Analyzed	MDL			
MTBE	08/28/95	0.200 mg/kg	ND	ND	ND
Benzene	08/28/95	0.200 mg/kg	ND	ND	ND
Toluene	08/28/95	0.200 mg/kg	0.372 mg/kg	ND	ND
Ethylbenzene	08/28/95	0.200 mg/kg	ND	ND	ND
Total Xylenes	08/28/95	0.200 mg/kg	1.09 mg/kg	0.373 mg/kg	0.386 mg/kg
1,3,5 Trimethylbenzene	08/28/95	0.200 mg/kg	0.990 mg/kg	ND	ND
1,2,4 Trimethylbenzene	08/28/95	0.200 mg/kg	0.874 mg/kg	ND	0.232 mg/kg
Lead	08/31/95	5.00 mg/kg	222 mg/kg	92.9 mg/kg	46.5 mg/kg
Moisture	08/28/95	1.00 %	15.1 %	22.7 %	30.5 %
Cadmium	09/01/95	1.000 mg/kg	ND	ND	ND
Chromium	09/01/95	5.00 mg/kg	16.1 mg/kg	65.1 mg/kg	9.05 mg/kg
Diesel Range Organics	08/25/95	5.00 mg/kg	10300 mg/kg	45.1 mg/kg	456 mg/kg
PCB's, total	08/25/95	0.024 mg/kg	ND	ND	ND

Remarks

MDL ⇒ Method Detection Limit
ND ⇒ Not Detected at or above MDL

SERIAL NUMBER
№ 13243

LAKE SUPERIOR LABORATORIES

728 GARFIELD AVENUE • DULUTH, MINNESOTA 55802
MN (218) 722-1911 • FAX (218) 722-3295

A DIVISION OF TWIN PORTS TESTING, INC.

LABORATORY REQUEST AND CHAIN OF CUSTODY RECORD

Project Name 552-95E. MAA / HUGHITT SLIP SUPERIOR, WI No. _____ P.O.# _____

Client TWIN PORTS TESTING Report To JON HEIKEL

Address 728 GARFIELD AVE TWIN PORTS TESTING

DULUTH, MN 55802 Bill To 552-95E. MAA

Phone (218) 722-1911 Fax _____

Sampler Signature _____

Sampler (Print) MARK DARBY / MARK UDD

Remarks

RESULTS BY 8/31/95

Sample No./Location	Date	Time	Matrix: Air	Matrix: Liquid	Matrix: Solid	Number Of Containers	Preservative	Analyses: DRO	Pb	Lead	Cadmium	Chromium	PCBs	LSL No.
551 (1')	8/24/95	1:55			X	4	✓	X	X	X	X	X	X	3952
552 (1')	8/24/95	2:10			X	4	✓	X	X	X	X	X	X	3953
553 (1')	8/24/95	2:25			X	4	✓	X	X	X	X	X	X	3954

Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By
[signature]	8/24/95 3:30	[signature] 8/24/95			
Relinquished By	Date/Time	Received By	Relinquished By	Date/Time	Received By

Turnaround Time: 2 Week_____ 2-5 Day_____ or 24 Hour Rush_____ (additional charge)

SAMPLE CONDITION UPON RECEIPT CHECKLIST

Project: Hugh. H Slip

Client: TPT-E

Date Received: 8/24/95

COC #: 13243

Samples Received By: H

JNanoon

(Signature)

		Yes	No
1.	Is there a chain of custody (COC) or letter stating information contained on a COC?	X	
2.	Is the date and time relinquished in agreement with that written on the letter or COC?	X	
3.	Do the samples received agree with the COC or accompanying paperwork (i.e. number of samples, matrices, sample tags, sample containers, analyses, etc.)?	X	
4.	Are all the samples within the holding times for requested analyses? Communicate any lapse of greater than 4 days beyond date of collection for VOA analysis.	X	
5.	Are all the sample containers intact (i.e., not broken, leaking, etc.)?	X	
6.	Did the samples arrive on ice?	NA	NA
	a) What temperature did the samples arrive at?	NA	
	b) Are the samples at the proper temperature?	NA	
7.	Is there enough sample to do all the analyses?	X	
8.	Are the samples preserved correctly?	X	
9.	Are the VOA vials head-space free?	NA	

'NO' Items Explained:

Department of Natural Resources

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

I.D. # 170

District: NWD County: Douglas (16)
Site Name: Hughitt Slip Property
Address:
Legal Municipality: Superior, City of
T V C

Case No.: PMN:
FID: 816105400
Proj. Mgr: C. Saari
Support Person:
Legal Desc: SE 1/4 NE 1/4 Sec 10, T 49, R 14 ~~E~~ W
Lat: N ___ " ___ . ___ ' Long: W ___ " ___ . ___ '

Date of Discovery: 08 / 29 / 95
Date of RP Contact: 12 / 08 / 95

PRIORITY SCREENING:
X 1 = High
___ 3 = Low
___ 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	L Env. Repair

RESPONSIBLE PARTY:

Business Name:
Owner/Mgr.: Norman & Donna Camenker
Address: 70 Highgate Court
Superior WI 54880
Phone: 715 / 392-5457
Contact Person: Same

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)	X	X
Soil Contamination	(5)	X	___
Direct Contact	(10)	___	___
Contaminated Surface Water	(7)	___	X
Contaminated Air	(8)	___	___
Other ___	(6)	___	___

CONSULTANT INFORMATION:

Company: Twin Ports Testing, Inc.
Contact Person: Jon Hinkel
Address: 728 Garfield Ave.
Duluth, MN 55802
Phone: 218 / 722-1911
(List additional on separate sheet & attach.)

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

EPA HAZARDOUS SUBSTANCES

(Please indicate if quantities are product or contaminated soil in pounds, gallons or cubic yards.)

TYPE (Enter Code)	DISCHARGED	RECOVERED	TREATED	STORED	DISPOSED	DISPOSAL LOCATION CITY	STATE

ERP CASE STATUS

(x as appropriate)

		DATE INITATED (MM YY)	DATE COMPLETED (MM YY)	COMMENTS
___	NO ACTION TAKEN	___/___	___/___	
___	EMERGENCY	___/___	___/___	
___	WORK PLAN APP	___/___	___/___	
___	FIELD INVEST I	___/___	___/___	
___	II	___/___	___/___	
___	III	___/___	___/___	
___	REM DESIGN	___/___	___/___	
___	REM ACTION I	___/___	___/___	
___	O & M I	___/___	___/___	
___	REM ACTION II	___/___	___/___	
___	O & M II	___/___	___/___	
___	LONG TERM MONT	___/___	___/___	
___	ENFORCEMENT	___/___	___/___	

EF STATE LEAD CONSULTANT COST (OPTIONAL)

CONSULTANT	CONTRACT/PURCHASE ORDER NUMBER	CONTRACT AMOUNT	AMOUNT PAID TO DATE	LAST INVOICE APPROVED DATE
		$	$	___/___/___
		$	$	___/___/___
		$	$	___/___/___
		$	$	___/___/___
		$	$	___/___/___
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		$	$	___/___/___