

Date and Mil. Time of Incident 07-01-98 0510	Date and Mil. Time Reported 07-01-98 0510
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Person Reporting Kelly Cresap	Telephone # (715) 398-3533
Representing Agency, Firm, or Citizen Murphy Oil	
Responsible Party Murphy Oil	
Contact Name Jim Kawitz	Telephone # (715) 398-3533
Address 2400 Stinson Ave	City, State, Zip Code Superior, WI 54880

Substance Involved Gasoline	Amount & Units Released	Amt. Recovered	Is this a 304 (11004 42 USC) spill? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
<input type="checkbox"/> Solid <input type="checkbox"/> Semisolid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas Color _____ Odor _____			

Exact Location (inc. address, facility name, mileage, bldg. #, etc.) 2400 Stinson Ave - Tank 57		
City Superior	County Douglas	Lat/long
DNR Region NO	1/4 sec T NR (E/W)	Weather Cond.

Cause of Incident
shaft on mixer broke, seal gave way on tank 57

Spilled Substance Impact To: Check (✓) all that apply <input checked="" type="checkbox"/> Air <input type="checkbox"/> Potential <input checked="" type="checkbox"/> Soil <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Groundwater <input type="checkbox"/> Potential <input type="checkbox"/> Surface Water <input type="checkbox"/> Potential Name: _____ <input type="checkbox"/> Storm Sewer <input type="checkbox"/> Potential <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Potential <input type="checkbox"/> Concrete/Asphalt <input type="checkbox"/> Potential <input type="checkbox"/> Private Well <input type="checkbox"/> Potential <input checked="" type="checkbox"/> Contained/Recovered <input type="checkbox"/> Other: _____	Spill Source: <input type="checkbox"/> Transportation Accident, Fuel Supply Tank Spill <input type="checkbox"/> Transportation Accident, Load Spill <input type="checkbox"/> Industrial Facility <input type="checkbox"/> Paper Mill <input type="checkbox"/> Chemical Co. <input type="checkbox"/> Ag Coop/Facility/Food Factory/Facility <input checked="" type="checkbox"/> Gas/Service Station/Garage/Auto Dealer, Repair Shop <input checked="" type="checkbox"/> Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler <input type="checkbox"/> Public Property (city, state, church, school, etc.) <input type="checkbox"/> Utility Co., Power Generating/Transfer Facility <input type="checkbox"/> Private Property (home/farm) <input type="checkbox"/> Construction, Excavation, Wrecking, Quarry, Mine <input type="checkbox"/> Airport Facility <input type="checkbox"/> Railroad Facility <input type="checkbox"/> Other _____	Action Taken By Spiller <input type="checkbox"/> No Action Taken <input type="checkbox"/> No Action Needed <input type="checkbox"/> Monitor <input checked="" type="checkbox"/> Cleanup Method: vacuum truck <input type="checkbox"/> Waste Destination: _____ <input type="checkbox"/> Containment <input checked="" type="checkbox"/> Contractor Hired Name: CEDA _____ <input type="checkbox"/> Other: _____
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Injuries? Yes No If yes, how many? _____ Has an evacuation occurred? Yes No Potential? Yes No

Are there any resource damages? Yes No What kinds? _____

Other Agencies Notified (✓ first column if notified); Check (✓) both columns if on scene <input type="checkbox"/> Fire Department/Hazmat <input checked="" type="checkbox"/> Local DNR <input type="checkbox"/> EPA <input type="checkbox"/> Local Law Enforcement <input type="checkbox"/> Div. Emer. Gov. <input type="checkbox"/> Nat'l Resp. Ctr. 800-442-8802 <input type="checkbox"/> LEPC or Local Emer. Gov. <input type="checkbox"/> DATCP 608-224-4500 <input type="checkbox"/> Chemtrec 800-424-9300 <input type="checkbox"/> Regional Response Team <input type="checkbox"/> DHSS 608-266-2830 <input type="checkbox"/> Other _____	Incident Commander, if known: _____ _____ Phone: _____
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Prepared By: (Print) John Knoll (Sign) [Signature] Date: 07-01	Rpt'd to DATCP? <input type="checkbox"/> Yes <input type="checkbox"/> No
Person Notified: N.A. Region Notified: N.A. Time: _____ Date: _____	
Invstgtd By: (Print) John Knoll (Sign) [Signature] Date: _____	Site Closed? <input type="checkbox"/> Yes <input type="checkbox"/> No
Spill Coordinator Signoff: [Signature] Date: 11-5-98	Transferred to ERP? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes; Case # _____ NFA Letter Sent? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Packet Sent? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Date and Military Time of Incident 07-01-98 0510	Responsible Party Murphy Oil
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Additional Comments:

contacted plant foreman by telephone at 1825.
CEDA still on scene doing clean up.

Mark Miller - safety and environmental control
contacted on 01-09. Unknown how much
gasoline was spilled on ground. Gasoline
continued to "spill" but was caught in
barrels. All of this product will be re-
ported as amount recovered, not just the
actual spilled material

NATIONAL RESPONSE CENTER - STATE*FAX

** GOVERNMENT USE ONLY ** GOVERNMENT USE ONLY ** GOVERNMENT USE ONLY **
DO NOT RELEASE this information to the public without permission
from the National Response Center (G-OPF), U. S. Coast Guard
Headquarters, Washington DC 20593-0001 (202)267-2875.

From: National Response Center
USCG HQ Washington, D. C.
1-800-424-8802

To: WI DEPT NAT RES BUREAU OF LAW ENF
Incident Report # 444052

INCIDENT DESCRIPTION

*Report taken by MASON at 08:11 on 01-JUL-98
Incident Type: FIXED Container Type: Above Ground
Tank Capacity: 89000 BBL(S)
Incident Cause: EQUIPMENT FAILURE
Affected Area: SOIL
The incident occurred on 01-JUL-98 at 03:30 local time.
Affected Medium: LAND

SUSPECTED RESPONSIBLE PARTY

Name: KELLY CRESAP
Organization: MURPHY OIL REFINERY
Address: 2400 STINSON AVE
SUPERIOR, WI 54880
Day Phone: (715)3983533
Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

2400 STINSON AVE County: DOUGLAS
TANK: 57
SUPERIOR, WI 54880

RELEASED MATERIAL(S)

CHRIS Code: GAS Official Material Name: GASOLINE: AUTOMOTIVE (UNLEADED)
Also Known As:
Qty Released: 165 GAL(S) Qty in Water: 0 NON(S)

SOURCE/CAUSE OF INCIDENT

STORAGE TANK / SEAL FAILURE ON A MIXER

DAMAGE

Injuries: Fatalities: Evacuations: Damages: Air Close: Road Close:
N N

REMEDIAL ACTIONS

SPILL WAS CONTAINED AT THE SOURCE / WILL BRING IN VACUUM TRUCKS TO
RECOVER THE MATERIAL

NOTIFICATIONS BY CALLER

EPA: STATE: Y CG: Y OTHER: DESC: DNR

NOTIFICATIONS BY NRC

ATSDR MN ATTN: LARRY SOUTHER (612)2150918
ATSDR WI ATTN: JAMES DREW (608)2682663
MSO DULUTH (218)7205286
U. S. EPA V MR THEISEN (312)3532318
NOAA 1ST CLASS BB RPTS FOR WI (206)5266344
MN DEM ATTN: M. KAM (612)6495451

*try Leiser
7-2-98 8:50 FAX to Jim HOSCH NRC. Res. west + Dept.*

NATIONAL RESPONSE CENTER - STATE*FAX
** GOVERNMENT USE ONLY ** GOVERNMENT USE ONLY ** GOVERNMENT USE ONLY **

NOTIFICATIONS BY NRC

WI DEPT NAT RES BUREAU OF LAW ENF

(608)2662598

ADDITIONAL INFORMATION

AREA OF IMPACT: 70 SQUARE FEET WEATHER: CLEAR WIND: CALM TEMP: 75F

*** END INCIDENT REPORT # 444052 ***

PLEASE VISIT OUR WEB SITE
<http://www.nrc.uscg.mil>

Fax'd to Jim Hosh
Northern Reg. (west)

+ Secy.

Mary Reiser

7-2-98 9:50

PHONE CONVERSATION RECORD

DATE: 11-10-98

TIME: 1:40

CONVERSED WITH: Liz Lundmark
Murphy Co.

SUBJECT/PROJECT: Tank 57 - July 1, 98

UNIQUE ID#.: _____

Lundmark will send info by end of week. Spun volume 160/gals according to Lundmark.

Signature: James W. Houder
(please write legibly)

TANK 57
EXCAVATION SAMPLING REPORT
MURPHY OIL U.S.A.
SUPERIOR, WISCONSIN
NOVEMBER, 1998

MURPHY OIL USA, INC.
2407 STINSON AVENUE
SUPERIOR, WISCONSIN 54880

ATTN:MS. ELIZABETH LUNDMARK

INTRODUCTION

This report summarizes the results of soil sampling conducted by Twin Ports Testing, Inc. (TPT) during remedial excavation activities at Tank 57. The purpose of the sampling was to investigate the extent of soil contamination associated with a gasoline release from Tank 57 in July of 1998.

TPT was authorized by Mr. William Gustafson of Murphy Oil USA, Inc. to investigate the extent of soil contamination associated with the above referenced release. TPT's scope of services for the project included:

- Directing the excavation of petroleum-impacted soil.
- Collecting soil samples from the excavation for field-screening.
- Collecting soil samples from the excavation for laboratory analysis.
- Preparing a report documenting the results of the excavation.

BACKGROUND INFORMATION

Site Information

Tank 57 is located at Murphy Oil USA Refinery, 2407 Stinson Avenue in Superior, Wisconsin (Figure 1). The release was caused by mechanical failure of a mixer on the tank. The volume of the release was estimated to be approximately 165 gallons.

Regional Geology

The site lies in Quaternary age glaciolacustrine deposits consisting of primarily red clay commonly more than 250 feet thick that locally contains small amounts of silt and sand in thin discontinuous layers. Bedrock beneath the glacial deposits is Precambrian in age, and consists predominantly of sandstone, shales, and conglomerate (United States Geological Survey (USGS) Hydrologic Investigation Atlas HA-524).

EXCAVATION CHRONOLOGY AND SCOPE OF WORK

The excavation took place on August 13-18 and September 21-23, 1998. Excavation of petroleum impacted soil was performed by J&D Enterprises, Inc. of Duluth, Minnesota. Excavated soil was transported to Lakehead Blacktop and Materials in Superior, Wisconsin for thermal treatment. Commonwealth Technologies, Inc. of Baraboo, Wisconsin performed the analytical services. A TPT environmental scientist directed the excavation, including collection of soil samples for field-screening and laboratory analysis.

Soil samples were visually examined for apparent signs of petroleum impact and classified according to ASTM D2488 (Standard Practice for Description and Identification of Soils, Visual Manual Procedure). The samples were logged in a field notebook and a field map showing site structures and sample locations was developed. Refinery north was used as project north. Soil samples were field-screened for volatile organic compounds (VOCs) using a Thermo

Environmental Instruments Model 580B portable photoionization detector (PID) equipped with a 10.6eV lamp.

Soil samples were collected in accordance with *Soil Sampling Requirements for LUST Site Investigations and Excavations*, WDNR Publ-SW-127-91. The number of excavation base and sidewall samples was reduced because of the shallow depth of the excavation. Soil samples were analyzed for gasoline range organics (GRO), petroleum volatile organic compounds (PVOCs): benzene, toluene, ethylbenzene, xylenes (o,m,p), 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene. Additionally, two stockpile soil samples collected during the August excavation were analyzed for GRO, PVOOC, reactive cyanide, reactive sulfide, flashpoint, pH, and TCLP benzene. One stockpile sample was collected during the September excavation and analyzed for GRO and PVOOC.

RESULTS

The dimensions of the excavation were approximately 90 feet in length by 30 feet in width. The maximum depth of the excavation was approximately 2.5 feet - this depth was not reached throughout the whole excavation. The depth of a soil sample shown on figures and tables in a given area does not necessarily reflect the total depth of the excavation at that point. The volume of petroleum impacted soil removed from the site is unknown but is estimated to be approximately 100-200 yds³.

On August 13-18, a total of thirty-two (32) soil samples (R-1 through R-32) throughout the excavation were field-screened to investigate the extent of petroleum impact. See Figure 3 and Table 1 for locations and results of field-screening samples. Additionally, a total of twelve (12) of these soil samples (R-21 through R-32) were submitted for laboratory analysis. See Figure 4, Table 2, and Appendix A for locations and results of laboratory analysis samples.

On September 21-23, a total of forty (40) soil samples (S-1, S-2A through S-2D, S-3, S-4A through S-4C, S-5, S-6, and B-1 through B-14 at varying depths) throughout the excavation were field-screened to investigate the extent of petroleum impact. See Figure 5 and Table 3 for locations and results of field-screening samples. Additionally, a total of twelve (12) soil samples were collected from the excavation for laboratory analysis. See Figure 6, Table 4, and Appendix A for locations and results of laboratory analysis samples.

LIMITATIONS OF INVESTIGATION AND REPORT

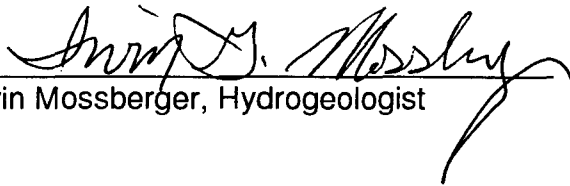
We have based the results of this report in part on the data obtained from the excavation field activities and chemical analysis of the collected soil samples. The exact nature and extent of geologic variations and levels of contamination at the site may not be evident.

Conclusions and/or recommendations contained herein are based on the applicable standards of our profession at the time this report was prepared. This warranty is in lieu of all other warranties either expressed or implied.

If you have any questions or need any additional information, please feel free to contact me at (715) 392-7114.

Sincerely,

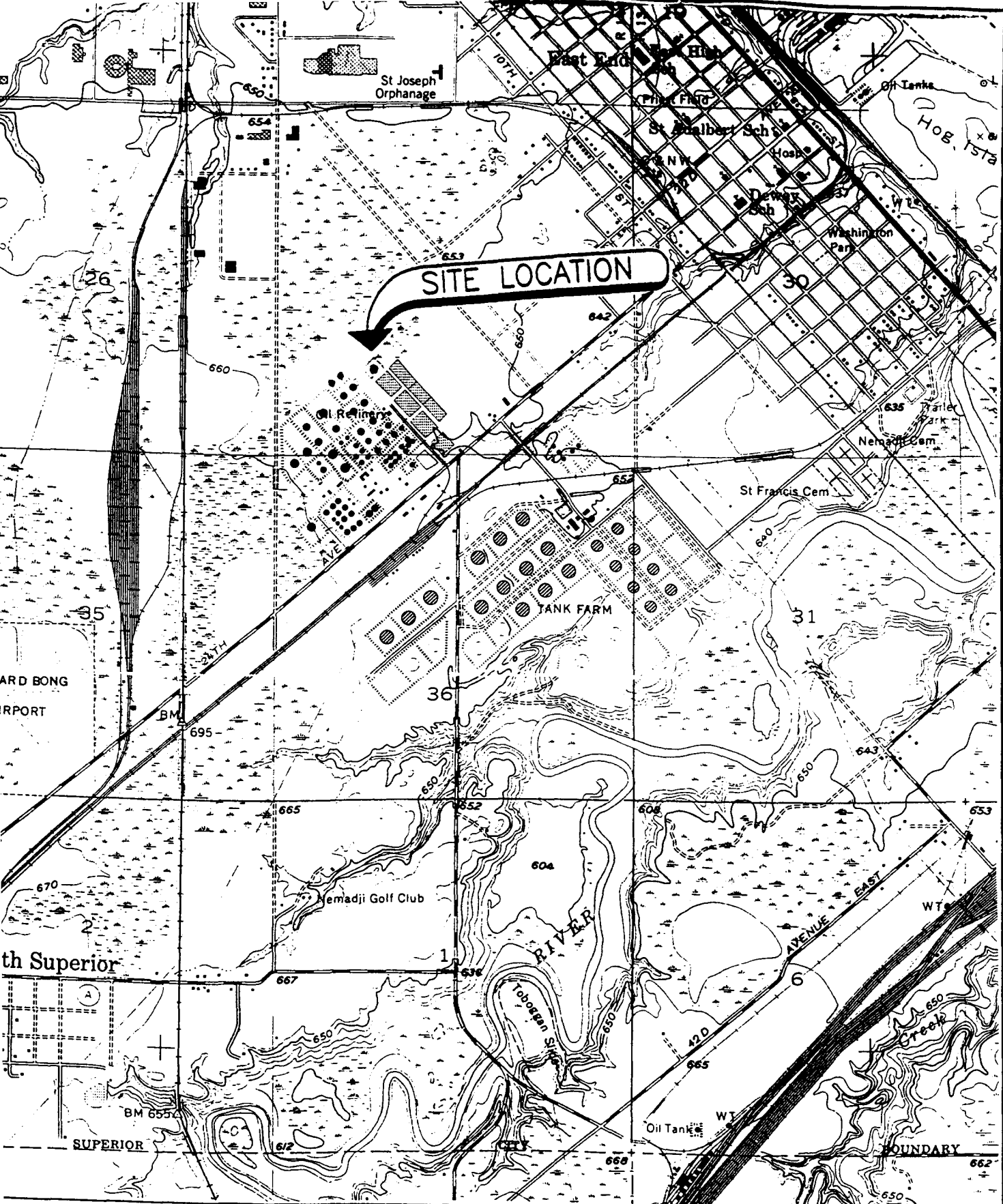
TWIN PORTS TESTING, INC.



Irvin Mossberger, Hydrogeologist



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



SITE LOCATION MAP

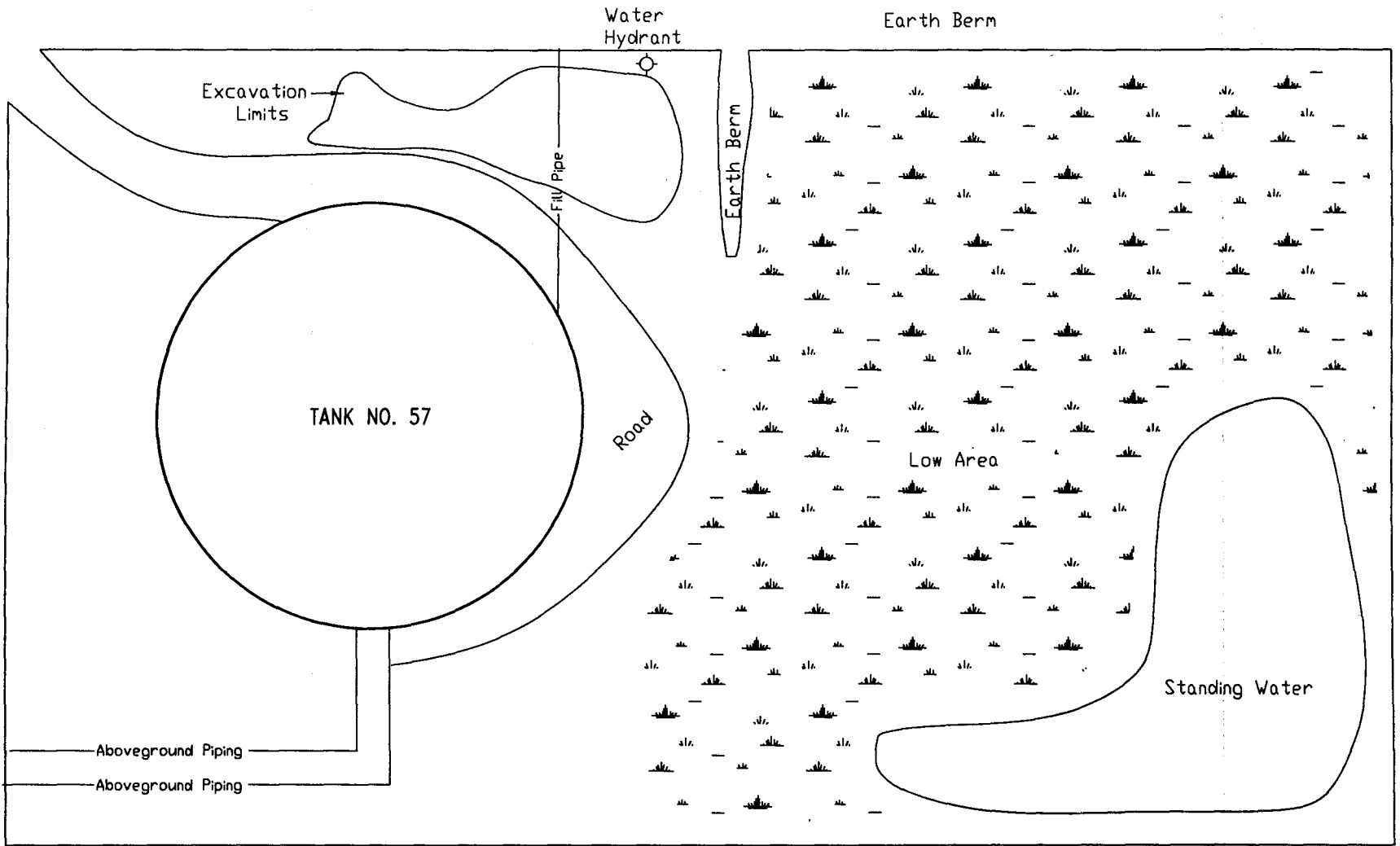
MURPHY OIL USA, INC.
SUPERIOR, WISCONSIN



Twin
Ports
Testing

DRAWN BY	MMR
CHECKED BY	IGM
APPR BY	BEM
DATE	12/97
TPT NO.	786-97E

FIGURE 1



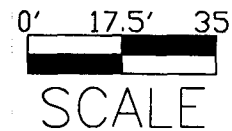
☐ MW-1

*NOTE: DRAWING DOES NOT REPRESENT AN EXACT SURV



SITE LOCATION MAP
 MURPHY OIL TANK #57
 MURPHY OIL COMPANY
 SUPERIOR, WISCONSIN

DRAWN BY	PJB
CHECKED BY	IGM
APPR BY	BEM
DATE	10/15/98
TPT NO.	850-98E
FIGURE	2



Earth Berm

N
O
R
T
H

R
E
F
E
R
E
N
C
E

Water Hydrant

Earth Berm

● R-18

● R-10

● R-16

● R-11

● R-1

R-12

● R-2

● R-3

● R-13

● R-14

● R-4

● R-15

● R-5

R-20

R-7

R-17

● R-6

● R-8

● R-9

● R-19

Fill Pipe

Road

Limit Of Excavation
8/13-18/98

TANK NO. 57

LEGEND

● R-16 = Sample Number And Location

*NOTE: DRAWING DOES NOT REPRESENT AN EXACT SURVEY

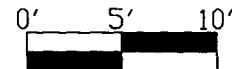


SAMPLE.DWG

FIELD SCREENING LOCATION MAP (8/13-18/98)

MURPHY OIL TANK #57
MURPHY OIL COMPANY
SUPERIOR, WISCONSIN

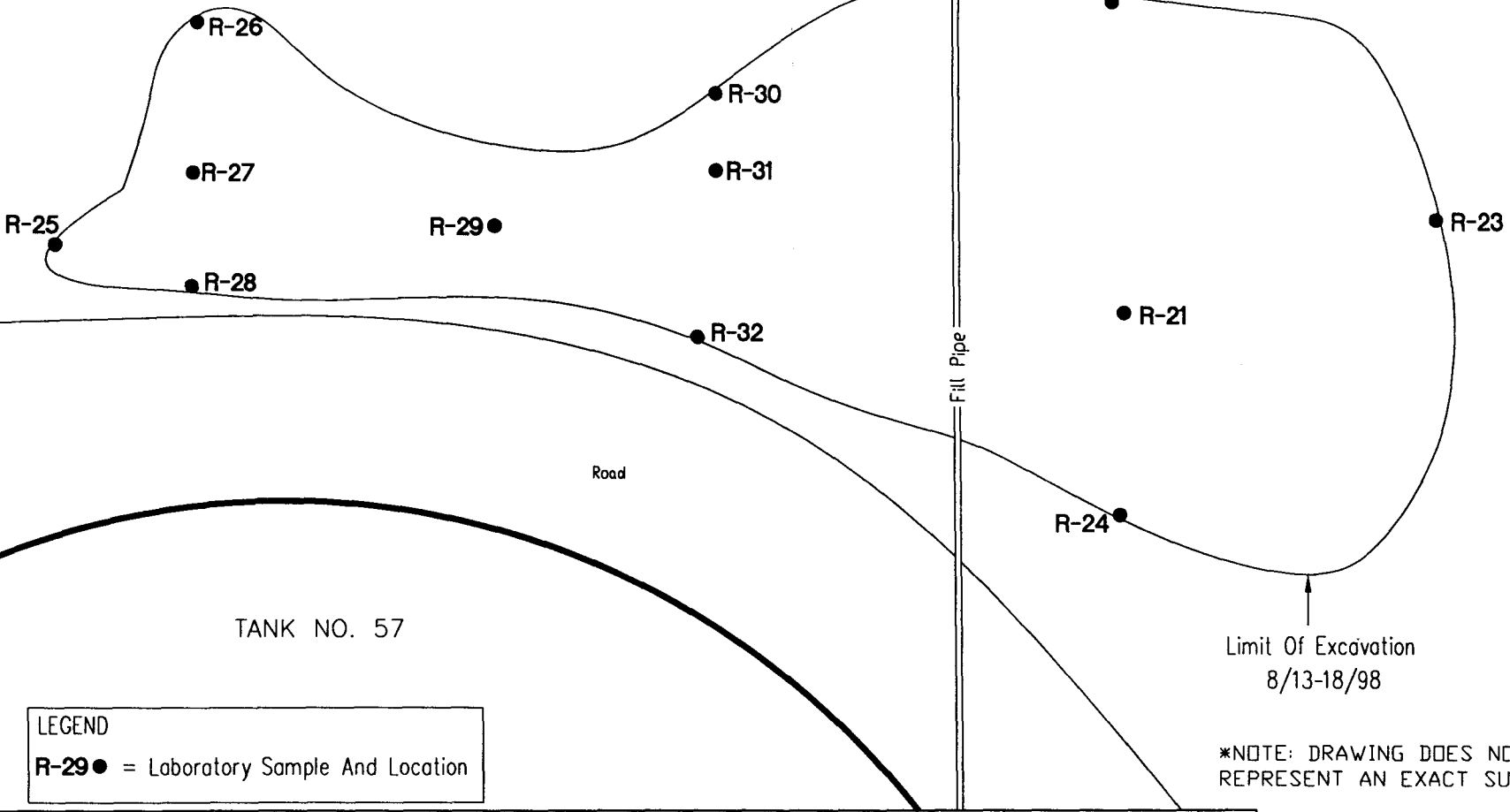
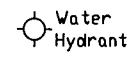
DRAWN BY		FJB
CHECKED BY		IGM
APPR BY		BEM
DATE	10/15/98	
TPT NO.	850-98E	
FIGURE		3



SCALE



Earth Berm



TANK NO. 57

Road

Fill Pipe

Earth Berm

LEGEND
R-29 ● = Laboratory Sample And Location

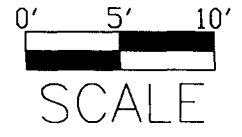
*NOTE: DRAWING DOES NOT REPRESENT AN EXACT SURVEY

Limit Of Excavation
8/13-18/98



LABORATORY ANALYSIS SAMPLE LOCATION MAP (8/13-18/98)
MURPHY OIL TANK #57
MURPHY OIL COMPANY
SUPERIOR, WISCONSIN

DRAWN BY	PJB
CHECKED BY	IGM
APPR BY	BEM
DATE	8/98
TPT NO.	850-98E
FIGURE	4

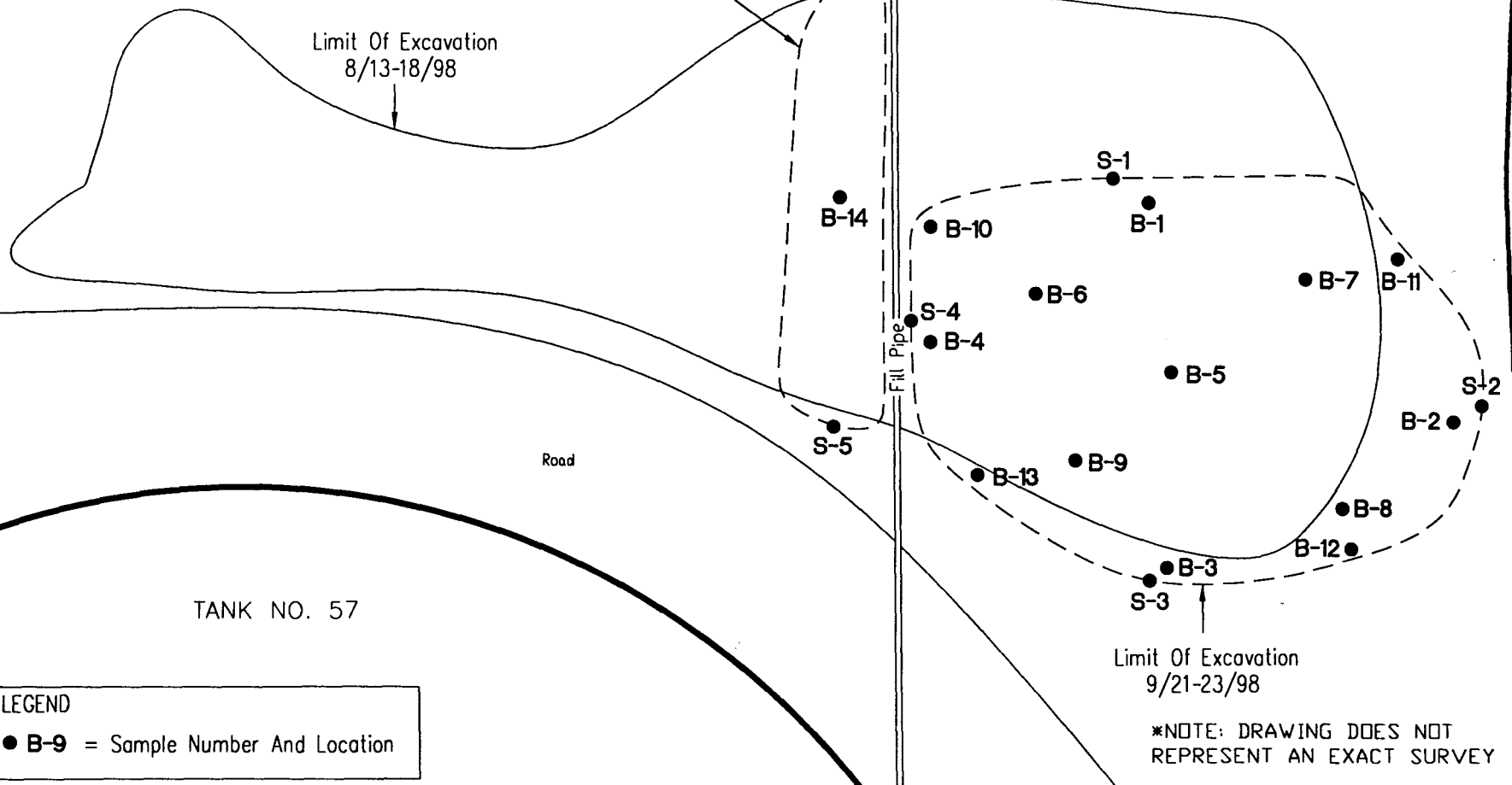
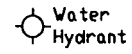




Earth Berm

Limit Of Excavation
9/21-23/98

Limit Of Excavation
8/13-18/98



Earth Berm

Road

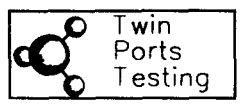
TANK NO. 57

Fill Pipe

Limit Of Excavation
9/21-23/98

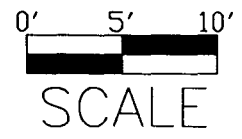
LEGEND
● B-9 = Sample Number And Location

*NOTE: DRAWING DOES NOT REPRESENT AN EXACT SURVEY



FIELD SCREENING LOCATION MAP (9/21-23/98)
MURPHY OIL TANK #57
MURPHY OIL COMPANY
SUPERIOR, WISCONSIN

DRAWN BY	PJB
CHECKED BY	IGM
APPR BY	BEM
DATE	10/15/98
TPT NO.	850-98E
FIGURE	5



N
O
R
T
H
E
R
N
E
R
Y

Earth Berm

Limit Of Excavation
9/21-23/98

Limit Of Excavation
8/13-18/98

Water
Hydrant

S-6

S-1

B-14

B-10

B-11

S-4

B-5

S-2

Road

S-5

B-13

B-12

S-3

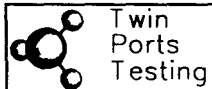
Limit Of Excavation
9/21-23/98

TANK NO. 57

LEGEND

● B-5 = Laboratory Sample And Location

*NOTE: DRAWING DOES NOT
REPRESENT AN EXACT SURVEY



CHEMSAM9.DWG

LABORATORY ANALYSIS SAMPLE LOCATION MAP (9/21-23/98)

MURPHY OIL TANK #57
MURPHY OIL COMPANY
SUPERIOR, WISCONSIN

DRAWN BY	PJB
CHECKED BY	IGM
APPR BY	BEM
DATE	10/15/98
TPT NO.	850-98E
FIGURE	6



TABLE 1
SOIL VAPOR SCREENING RESULTS
MURPHY OIL U.S.A.
8/13-18/98
TANK 57

Sample ID	Depth (feet)	Soil Type	Soil Moisture	PID Reading (ppm)
R-1	0.50	red-brown clay, little organics	M	699
R-2	0.50	red-brown clay, little organics	M	1181
R-3	0.50	red-brown clay, little organics	M	1331
R-4	0.50	red-brown clay, little organics	M	60
R-5	0.50	red-brown clay, little organics	M	1719
R-6	0.50	red-brown clay, little organics	M	907
R-7	0.50	red-brown clay, little organics	M	950
R-8	0.75	red-brown clay	M	515
R-9	0.75	red-brown clay	M	0
R-10	1.00	red-brown clay, little organics	M	13
R-11	0.50	red-brown clay, little organics	M	109
R-12	1.50	red-brown clay, little organics	M	27
R-13	1.50	red-brown clay, little organics	M	9
R-14	1.00	red-brown clay, little organics	M	13
R-15	1.50	red-brown clay, little organics	M	20
R-16	1.00	red-brown clay, little organics	M	68
R-17	1.00	red-brown clay, little organics	M	136
R-18	1.50	red-brown clay, little organics	M	18
R-19	1.00	red-brown clay, little organics	M	227
R-20	0.50	red-brown clay, little organics	M	120
R-21 (L)	2.00	red-brown clay, little organics	M	7
R-22 (L)	1.00	red-brown clay, little organics	M	5
R-23 (L)	1.50	red-brown clay, little organics	M	0
R-24 (L)	1.50	red-brown clay, little organics	M	0
R-25 (L)	1.00	red-brown clay, little organics	M	2
R-26 (L)	1.50	red-brown clay, little organics	M	0
R-27 (L)	2.00	red-brown clay, little organics	M	0
R-28 (L)	1.00	red-brown clay, little organics	M	0
R-29 (L)	1.50	red-brown clay, little organics	M	0
R-30 (L)	1.50	red-brown clay, little organics	M	0
R-31 (L)	2.00	red-brown clay, little organics	M	2
R-32 (L)	1.00	red-brown clay, little organics	M	0
SP-1 (L)	--	red-brown clay, little organics	M	100
SP-2 (L)	--	red-brown clay, little organics	M	209

PID = photoionization detector
ppm = parts per million
(L) = chemical analysis sample

D = dry
M = moist
W = wet

TABLE 2
LABORATORY ANALYTICAL RESULTS
MURPHY OIL U.S.A.
8/13-18/98
TANK 57

Parameter	R-21	R-22	R-23	R-24	R-25	R-26	R-27	R-28	R-29	R-30	R-31	R-32	SP-1	SP-2
Date Sampled	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98	8/18/98
GRO (mg/kg)	<1.3	2.4	10	9.2	<1.3	3.4	2	<1.3	<1.3	2.9	<1.3	2.2	260	590
Benzene (mg/kg)	0.042	0.44	1.8	2.4	0.16	0.55	0.15	0.076	<0.025	0.51	0.17	0.29	6.1	22
Toluene (mg/kg)	0.065	0.56	2.9	3.2	0.14	1.1	0.33	0.13	0.048	0.46	0.29	0.5	28	87
Ethylbenzene (mg/kg)	<0.025	<0.025	0.28	0.21	<0.025	0.092	0.11	<0.025	<0.025	<0.025	<0.025	0.081	7	23
Xylenes o,m,p (mg/kg)	<0.025	0.355	1.86	1.48	0.187	0.39	0.44	0.0995	<0.025	0.286	0.225	0.172	60	102
1,2,4 Trimethylbenzene (mg/kg)	<0.025	0.088	0.38	<0.026	<0.025	0.083	0.15	<0.025	<0.025	<0.025	0.081	0.025	28	39
1,3,5 Trimethylbenzene (mg/kg)	<0.025	<0.025	0.18	0.093	<0.025	<0.025	0.084	<0.025	<0.025	<0.025	<0.025	<0.025	13	19
MTBE (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.25	<2.5
Reactive cyanide	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	negative	negative
Reactive sulfide	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	negative	negative
Flashpoint	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	none*	none*
pH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.5	7.4
TCLP - Benzene	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<0.010	<0.010

n/a = not analyzed

ug/kg = micrograms per kilogram or parts per billion

mg/kg = milligrams per kilogram or parts per million

* = sample does not exhibit characteristics of ignitability

TABLE 3
SOIL VAPOR SCREENING RESULTS
MURPHY OIL U.S.A.
9/21-23/98
TANK 57

Sample ID	Depth (feet)	Soil Type	Soil Moisture	PID Reading (ppm)
S-1 (L)	0.50	red-brown clay	M	2
S-2	0.50	red-brown clay	M	257
S-3 (L)	1.00	red-brown clay	M	4
S-4	0.50	red-brown clay	M	662
B-1	0.75	red-brown clay	M	6
B-2	1.00	red-brown clay	M	369
B-3	1.50	red-brown clay	M	26
B-4	1.00	red-brown clay	M	11
B-5	1.00	red-brown clay	M	86
B-6	0.75	red-brown clay	M	4
B-7	0.75	red-brown clay	M	8
B-8	1.00	red-brown clay	M	158
B-9	1.00	red-brown clay	M	82
B-10	0.75	red-brown clay	M	41
B-11 (L)	0.75	red-brown clay	M	0
B-12 (L)	1.50	red-brown clay	M	0
B-13	1.50	red-brown clay	M	235
S-2A	0.75	red-brown clay	M	17
B-2	1.50	red-brown clay	M	0
B-8/SP-1 (L)	1.50	red-brown clay	M	255
B-5 (L)	1.50	red-brown clay	M	0
B-9	1.50	red-brown clay	M	6
B-3	2.00	red-brown clay	M	0
B-10 (L)	1.25	red-brown clay	M	2
S-4A	0.75	red-brown clay	M	15
B-4	1.50	red-brown clay	M	12
B-13 (L)	2.00	red-brown clay	M	2
S-2B	0.75	red-brown clay	M	40
B-8	2.00	red-brown clay	M	0
S-4B	0.75	red-brown clay	M	15
B-4	2.00	red-brown clay	M	43
S-2C	0.75	red-brown clay	M	19
S-2D (L)	0.75	red-brown clay	M	0
S-4C (L)	0.75	red-brown clay	M	2
B-4	2.50	red-brown clay	M	0

PID = photoionization detector
ppm = parts per million
(L) = chemical analysis sample

D = dry
M = moist
W = wet

TABLE 3 con't.
SOIL VAPOR SCREENING RESULTS
MURPHY OIL U.S.A.
9/21-23/98
TANK 57

Sample ID	Depth (feet)	Soil Type	Soil Moisture	PID Reading (ppm)
B-14	1.00	red-brown clay	M/W	19
S-5 (L)	1.00	red-brown clay	M/W	4
B-14	1.50	red-brown clay	M/W	25
B-14 (L)	2.00	red-brown clay	M/W	0
S-6 (L)	1.00	red-brown clay	M/W	2

PID = photoionization detector
 ppm = parts per million
 (L) = chemical analysis sample

D = dry
 M = moist
 W = wet

TABLE 4
LABORATORY ANALYTICAL RESULTS
MURPHY OIL U.S.A.
9/21-23/98
TANK 57

Parameter	S-1	S-3	B-11	B-12	B-14	B-5	B-10	B-13	S-2D	S-4C	S-5	S-6	SP-1
Date Sampled	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98	9/23/98
GRO (mg/kg)	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	14
Benzene (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.68
Toluene (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	2
Ethylbenzene (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.39
Xylenes o,m,p (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	2.46
1,2,4 Trimethylbenzene (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	1
1,3,5 Trimethylbenzene (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.34
MTBE (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.071
Reactive cyanide	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Reactive sulfide	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Flashpoint	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
pH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TCLP - Benzene	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

n/a = not analyzed

ug/kg = micrograms per kilogram or parts per billion

mg/kg = milligrams per kilogram or parts per million



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email: fyi@ctienv.com
Page: 1

ANALYTICAL REPORT

Customer #: LT7000003487
Work Order: 9808000651
Report Date: 09/04/98
Date Received: 08/20/98
Arrival Temperature: 14.4

Report Submitted By: 
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: EDER

Project Number: 850-98E

Sample I.D. #: 209407 Sample Description: R-21

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date	Date	Analyst	Method
						Extracted	Analyzed		
Total Percent Solids	78.1	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	0.042	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	0.065	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO

Sample I.D. #: 209408 Sample Description: R-22

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date	Date	Analyst	Method
						Extracted	Analyzed		
Total Percent Solids	76.5	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	0.088	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	0.44	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	2.4	mg/kg	KJ	1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	0.26	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	0.095	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	0.56	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO

Sample I.D. #: 209409 Sample Description: R-23

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date	Date	Analyst	Method
						Extracted	Analyzed		
Total Percent Solids	80.5	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	0.38	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	0.18	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	1.8	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	0.28	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	10	mg/kg	K	1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	1.4	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	0.46	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	2.9	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO



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ANALYTICAL REPORT

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Customer #: LT7000003487
Work Order: 9808000651
Report Date: 09/04/98
Date Received: 08/20/98
Arrival Temperature: 14.4

Report Submitted By: JH
Record Reviewer

Note: None

Project Name: EDER

Project Number: 850-98E

Sample I.D. #: 209410 Sample Description: R-24

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	79.0	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	<0.026	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	0.093	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	2.4	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	0.21	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	9.2	mg/kg	K	1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	1.1	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	0.38	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	3.2	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO

Sample I.D. #: 209411 Sample Description: R-25

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	76.1	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	0.16	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg	K	1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	0.14	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	0.047	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	0.14	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO

Sample I.D. #: 209412 Sample Description: R-26

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	74.3	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	0.083	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	0.55	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	0.092	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	3.4	mg/kg	J	1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	0.26	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	0.13	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	1.1	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO



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ANALYTICAL REPORT

Customer #: LT7000003487
Work Order: 9808000651
Report Date: 09/04/98
Date Received: 08/20/98
Arrival Temperature: 14.4

Report Submitted By: [Signature]
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: EDER

Project Number: 850-98E

Sample I.D. #: 209413 Sample Description: R-27

Date Sampled: 08/18/98

Table with columns: Analyte, Result, Units, Qualifier, LOD, LOQ, Date Extracted, Date Analyzed, Analyst, Method. Rows include Total Percent Solids, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, Gasoline Range Organics, m & p- Xylene, Methyl t-Butyl Ether, o-Xylene, Toluene.

Sample I.D. #: 209414 Sample Description: R-28

Date Sampled: 08/18/98

Table with columns: Analyte, Result, Units, Qualifier, LOD, LOQ, Date Extracted, Date Analyzed, Analyst, Method. Rows include Total Percent Solids, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, Gasoline Range Organics, m & p- Xylene, Methyl t-Butyl Ether, o-Xylene, Toluene.

Sample I.D. #: 209415 Sample Description: R-29

Date Sampled: 08/18/98

Table with columns: Analyte, Result, Units, Qualifier, LOD, LOQ, Date Extracted, Date Analyzed, Analyst, Method. Rows include Total Percent Solids, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, Gasoline Range Organics, m & p- Xylene, Methyl t-Butyl Ether, o-Xylene, Toluene.



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ANALYTICAL REPORT

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email: fyi@ctienv.com
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Customer #: LT7000003487
Work Order: 9808000651
Report Date: 09/04/98
Date Received: 08/20/98
Arrival Temperature: 14.4

Report Submitted By: Ad
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: EDER

Project Number: 850-98E

Sample I.D. #: 209416 Sample Description: R-30

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	74.0	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	0.51	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	2.9	mg/kg	JK	1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	0.22	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	0.066	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	0.46	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO

Sample I.D. #: 209417 Sample Description: R-31

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	76.6	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	0.081	mg/kg		0.015	0.053	08/26/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/26/98	08/27/98	DJW	WDNR GRO
Benzene	0.17	mg/kg		0.009	0.029	08/26/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	08/26/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg	K	1.3	4.5	08/26/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	0.17	mg/kg		0.017	0.053	08/26/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/26/98	08/27/98	DJW	WDNR GRO
o-Xylene	0.055	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO
Toluene	0.29	mg/kg		0.008	0.026	08/26/98	08/27/98	DJW	WDNR GRO

Sample I.D. #: 209418 Sample Description: R-32

Date Sampled: 08/18/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	76.7	%					08/21/98	EMH	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	08/21/98	08/26/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/21/98	08/26/98	DJW	WDNR GRO
Benzene	0.29	mg/kg		0.009	0.029	08/21/98	08/26/98	DJW	WDNR GRO
Ethylbenzene	0.081	mg/kg		0.009	0.028	08/21/98	08/26/98	DJW	WDNR GRO
Gasoline Range Organics	2.2	mg/kg	J	1.3	4.5	08/21/98	08/26/98	DJW	WDNR GRO
m & p- Xylene	0.098	mg/kg		0.017	0.053	08/21/98	08/26/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/21/98	08/26/98	DJW	WDNR GRO
o-Xylene	0.074	mg/kg		0.008	0.026	08/21/98	08/26/98	DJW	WDNR GRO
Toluene	0.50	mg/kg		0.008	0.026	08/21/98	08/26/98	DJW	WDNR GRO



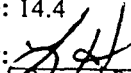
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ANALYTICAL REPORT

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Baraboo, WI 53913-3901
Phone: 800-228-3012
Fax: 608-356-2766
email: fyi@ctienv.com

Customer #: LT7000003487
Work Order: 9808000651
Report Date: 09/04/98
Date Received: 08/20/98
Arrival Temperature: 14.4

Report Submitted By: 
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: Does not exhibit characteristics of ignitability.

Project Name: EDER

Project Number: 850-98E

Sample I.D. #:	Sample Description:	Date Sampled:			Date	Date			
209419	SP-1	08/18/98	LOD	LOQ	Extracted	Analyzed	Analyst	Method	
<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>LOD</u>	<u>LOQ</u>	<u>Extracted</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Method</u>
Flashpoint						08/21/98	JDC	40 CFR 261.21	
Cyanide, Reactive	8/26/98							Sub Lab	
Reactive Sulfide Analysis Date	8/24/98							Sub Lab	
ZHE Extraction - TCLP	9/01/98				09/01/98	09/01/98	JDC	EPA 1311	
pH (Soil)(Lab)	7.5	S.U.'s				08/21/98	JDC	EPA 9040	
Total Percent Solids	72.1	%				08/21/98	EMH	EPA 5030	
Benzene	<0.010	mg/L		0.01	0.03	09/02/98	DJW	8260A	
1,2,4-Trimethylbenzene	28	mg/kg		0.015	0.053	08/26/98	LMH	WDNR GRO	
1,3,5-Trimethylbenzene	13	mg/kg		0.010	0.030	08/26/98	LMH	WDNR GRO	
Benzene	6.1	mg/kg	V	0.009	0.029	08/26/98	LMH	WDNR GRO	
Ethylbenzene	7.0	mg/kg		0.009	0.028	08/26/98	LMH	WDNR GRO	
Gasoline Range Organics	260	mg/kg	KL	1.3	4.5	08/26/98	LMH	WDNR GRO	
m & p- Xylene	42	mg/kg		0.017	0.053	08/26/98	LMH	WDNR GRO	
Methyl t-Butyl Ether	<0.25	mg/kg		0.011	0.034	08/26/98	LMH	WDNR GRO	
o-Xylene	18	mg/kg		0.008	0.026	08/26/98	LMH	WDNR GRO	
Toluene	28	mg/kg		0.008	0.026	08/26/98	LMH	WDNR GRO	

Sample I.D. #:	Sample Description:	Date Sampled:			Date	Date			
209420	SP-2	08/18/98	LOD	LOQ	Extracted	Analyzed	Analyst	Method	
<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>LOD</u>	<u>LOQ</u>	<u>Extracted</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Method</u>
Flashpoint						08/21/98	JDC	40 CFR 261.21	
Cyanide, Reactive	8/26/98							Sub Lab	
Reactive Sulfide Analysis Date	8/24/98							Sub Lab	
ZHE Extraction - TCLP	9/01/98				09/01/98	09/01/98	JDC	EPA 1311	
pH (Soil)(Lab)	7.4	S.U.'s				08/21/98	JDC	EPA 9040	
Total Percent Solids	78.5	%				08/21/98	EMH	EPA 5030	
Benzene	<0.010	mg/L		0.01	0.03	09/02/98	DJW	8260A	
1,2,4-Trimethylbenzene	39	mg/kg		0.015	0.053	08/26/98	LMH	WDNR GRO	
1,3,5-Trimethylbenzene	19	mg/kg		0.010	0.030	08/26/98	LMH	WDNR GRO	
Benzene	22	mg/kg	V	0.009	0.029	08/26/98	LMH	WDNR GRO	
Ethylbenzene	23	mg/kg		0.009	0.028	08/26/98	LMH	WDNR GRO	
Gasoline Range Organics	590	mg/kg	K	1.3	4.5	08/26/98	LMH	WDNR GRO	
m & p- Xylene	75	mg/kg		0.017	0.053	08/26/98	LMH	WDNR GRO	
Methyl t-Butyl Ether	<2.5	mg/kg		0.011	0.034	08/26/98	LMH	WDNR GRO	
o-Xylene	27	mg/kg		0.008	0.026	08/26/98	LMH	WDNR GRO	
Toluene	87	mg/kg		0.008	0.026	08/26/98	LMH	WDNR GRO	



**Commonwealth
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Laboratory Division

Accredited Lab Data for Today's Environment

ANALYTICAL REPORT

1230 Lange Court
Baraboo, WI 53913-3901
Phone: 800-228-3012
Fax: 608-356-2766
email: fyi@ctienv.com
Page:6

Customer #: LT7000003487
Work Order: 9808000651
Report Date: 09/04/98
Date Received: 08/20/98
Arrival Temperature: 14.4

Report Submitted By: SA
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: EDER

Project Number: 850-98E

Sample I.D. #: 209421 **Sample Description:** FIELD BLANK

Date Sampled: 08/18/98

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>LOD</u>	<u>LOQ</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Analyst</u>	<u>Method</u>
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	08/24/98	08/27/98	DJW	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	08/24/98	08/27/98	DJW	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	08/24/98	08/27/98	DJW	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	08/24/98	08/27/98	DJW	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	08/24/98	08/27/98	DJW	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	08/24/98	08/27/98	DJW	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	08/24/98	08/27/98	DJW	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	08/24/98	08/27/98	DJW	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	08/24/98	08/27/98	DJW	WDNR GRO



Commonwealth Technology, Inc.

Laboratory Division

Data Qualifiers

1230 Lange Court
Baraboo, WI 53913-3901
Phone: 800-228-3012
Fax: 608-356-2766
email: fyi@ctienv.com

Accredited Lab Data for Today's Environment

- A Sample analyzed with a dilution. Surrogates were diluted outside the calibration range.
Applies to all analytes for this method.
- B Analyte detected in associated Method Blank.
- C Sample result confirmed by alternate analysis.
- D Results reported from higher dilution.
- E Analyte concentration exceeded calibration range.
- F Unable to analyze due to sample matrix interference. Applies to all analytes for this method.
- G Insufficient sample for analysis. Applies to all analytes for this method.
- H Sample was received past the established holding time. Applies to all analytes for this method.
- I Sample was analyzed past the established holding time. Applies to all analytes for this method.
- J Reported concentration below the Quantitation Limit.
- K Sample contained lighter hydrocarbon fractions.
- L Sample contained heavier hydrocarbon fractions.
- M Matrix Spike and/or Matrix Spike Duplicate outside acceptance limits.
- O Hydrocarbons atypical of gasoline.
- P Hydrocarbons atypical of diesel #2 fuel.
- Q Laboratory Control Sample outside acceptance limits.
- S Surrogate outside acceptance limits. Applies to all analytes for this method.
- T Sample received exceeding proper preservation criteria. Applies to all analytes for this method.
- V Raised Quantitation Limit due to dilution for background interference. Applies to all analytes for this method.
- W Raised Quantitation Limit due to limited sample volume. Applies to all analytes for this method.
- Y Replicate outside acceptance limits.
- Z Calibration criteria exceeded.

- 1 Safe, No Total Coliform detected.
- 2 Unsafe, Total Coliform detected, no E. coli detected.
- 3 Unsafe, Total Coliform detected, E. coli detected.
- 4 Sample weight was below program minimum. Applies to all analytes for this method.
- 5 Insufficient oxygen depletion.
- 6 Complete oxygen depletion.
- 7 Sliding BOD, toxicity present in sample.

CTI Wisconsin Division Laboratory Certification #'s:

IA DNR: 146

KY Dept. of Environmental Protection: 90110

WI DNR: 157066030

DATCP: 289



LABORATORIES, Inc.

140 E. Ryan Road, Oak Creek, WI 53154-4599
414-764-7005 • FAX 414-764-0486 • 1-800-422-2195

WE ARE AN EQUAL OPPORTUNITY EMPLOYER



WI DNR Lab Certification #241283020

FINAL REPORT

Report Date: 26 Aug 1998
Lab Number: 98-N2086
Work Order #: 25-1570
Lab Matrix: NW
Account #: 029988
Date Sampled: 18 Aug 1998 15:15
Sampled By: Client
Date Received: 24 Aug 1998 12:26

COMMONWEALTH TECHNOLOGY, INC.
1230 S BOULEVARD
BARABOO WI 53913

Temperature at Receipt: RECEIVED ON ICE
Purchase Order Number: TPT #850-98
Chain of Custody Number: 1327

Project Name: TPT #850-98
Sample Desc: 209419/SP-1

Project Number: 9808-651

Container Integrity: Meets Standard, Sample Integrity: Meets Standard

	Wet Result	Dry Result	Unit	LOD	LOQ	Procedure	Test Date
Cyanide, Reactive Screen	Negative	N/A		N/A	N/A	D5049-90	26 Aug 1998
Sulfide, Reactive Screen	Negative	N/A		N/A	N/A	D4978-89	24 Aug 1998

Approved by:

PDF

Signatory

All soil and water samples will be disposed of by MVTL 60 days following date of receipt.
All waste samples (non-water, non-soil) will be returned 60 days following date of receipt.

N/T = Not Tested, N/A = Not Applicable, N/D = Not Detected
D = Detected below the LOQ. J = Estimated below the LOQ.

Elevated Detection Limits:

@ = Due to matrix interference. # = Due to sample concentration.
S = Due to sample quantity. + = Due to extract volume.

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.



LABORATORIES, Inc.

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Page: 1



WI DNR Lab Certification #241283020

FINAL REPORT

COMMONWEALTH TECHNOLOGY, INC.

1230 S BOULEVARD

BARABOO WI 53913

Project Name: TPT #850-98

Sample Desc: 209420/SP-2

Report Date: 26 Aug 1998

Lab Number: 98-N2087

Work Order #: 25-1570

Lab Matrix: NW

Account #: 029988

Date Sampled: 18 Aug 1998 15:17

Sampled By: Client

Date Received: 24 Aug 1998 12:26

Temperature at Receipt: RECEIVED ON ICE

Purchase Order Number: TPT #850-98

Chain of Custody Number: 1327

Project Number: 9808-651

Container Integrity: Meets Standard, Sample Integrity: Meets Standard

	Wet Result	Dry Result	Unit	LOD	LOQ	Procedure	Test Date
Cyanide, Reactive Screen	Negative	N/A		N/A	N/A	D5049-90	26 Aug 1998
Sulfide, Reactive Screen	Negative	N/A		N/A	N/A	D4978-89	24 Aug 1998

Commonwealth Technology, Inc.



ENVIRONMENTAL AND ANALYTICAL SERVICES

1230 Lange Court
Baraboo, WI 53913

1-800-228-3012 (608) 356-2760 FAX: (608) 356-2766

FILL IN ANALYSIS NEEDED BELOW

remarks.

Nº 2099

651

Project #: 850-93E Proj. Name: _____

Client Name / Number: Twin Ports Testing, Inc / Eder Associates Number of Containers: _____

Date	Time	Comp	Grab	Sample Description	Sample #	Number of Containers	CRU	PVOC	CN-	S2-	Flash Point	pH
8/17/98	12:55		X	R-21 2'	Z	2	X	X				
	1:00			R-22 1'								
	1:05			R-23 1.5'								
	1:08			R-24 1.5'								
	1:28			R-25 1.0'								
	1:32			R-26 1.5'								
	1:38			R-27 2.0'								
	1:41			R-28 1.0'								
	1:46			R-29 1.5'								
	1:48			R-30 1.5'								
	1:52			R-31 2.0'								
	1:55			R-32 1.0'								
	3:15			SP-1		4			X	X	X	X
	3:17			SP-2		4			X	X	X	X
				Field Blank		1						

Space Below For Laboratory Use

Pres.	Sample I.D. #'s:
	209407
	209408
	209409
	209410
	209411
	209412
	209413
	209414
	209415
	209416
	209417
	209418
	209419
	209420
	209421

Sampled By: Irvin G. Mossberger

Relinquished By: [Signature] Date: 8/17/98 Time: 8:35

Received By: _____ Date: _____ Time: _____

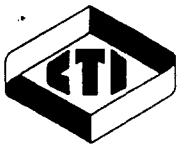
Received By Lab: [Signature] Date: 8/20/98 Time: _____

Remarks: * probed MeOH vial

Date Sample Disposed of: _____ Sample Shipped Via: X UPS _____ Fed. Exp. _____ Hand _____ U.S. Mail

Sublab: _____ Is this a PECFA project? (Please indicate "Yes" or "No") Yes

Sample Status: 14.4 * pH: _____ Deg. C: _____



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Page: 1

ANALYTICAL REPORT

Customer #: LT7000003487
Work Order: 9809000945
Report Date: 10/08/98
Date Received: 09/25/98
Arrival Temperature: On Ice

Report Submitted By: HGC
Record Reviewer

REC'D OCT 6 1998

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: TK 57

Project Number: 850-98E

Sample I.D. #: 213942 Sample Description: S-1

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	77.1	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO

Sample I.D. #: 213943 Sample Description: S-3

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	76.4	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO

Sample I.D. #: 213944 Sample Description: B-11

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	78.1	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO



**Commonwealth
Technology, Inc.**

Laboratory Division

Accredited Lab Data for Today's Environment

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email: fyi@ctienv.com

Page:2

ANALYTICAL REPORT

Customer #: LT7000003487
Work Order: 9809000945
Report Date: 10/08/98
Date Received: 09/25/98
Arrival Temperature: On Ice

Report Submitted By: HGC
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: TK 57

Project Number: 850-98E

Sample I.D. #: 213945 **Sample Description:** B-12

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	79.7	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics m & p- Xylene	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO

Sample I.D. #: 213946 **Sample Description:** B-14

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	76.9	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics m & p- Xylene	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO

Sample I.D. #: 213947 **Sample Description:** B-5

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	77.5	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics m & p- Xylene	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO



**Commonwealth
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Laboratory Division

Accredited Lab Data for Today's Environment

1230 Lange Court
Baraboo, WI 53913-3901
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Fax: 608-356-2766
email: fyi@ctienv.com

Page:3

ANALYTICAL REPORT

Customer #: LT7000003487
Work Order: 9809000945
Report Date: 10/08/98
Date Received: 09/25/98
Arrival Temperature: On Ice

Report Submitted By: HGC
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: TK 57

Project Number: 850-98E

Sample I.D. #: 213948 **Sample Description:** B-10 **Date Sampled:** 09/23/98

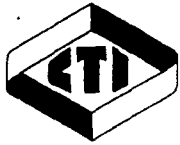
Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	77.8	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO

Sample I.D. #: 213949 **Sample Description:** B-13 **Date Sampled:** 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	78.5	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO

Sample I.D. #: 213950 **Sample Description:** S-2d **Date Sampled:** 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	75.8	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/03/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/03/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/03/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/03/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/03/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/03/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/03/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO



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ANALYTICAL REPORT

Customer #: LT7000003487
Work Order: 9809000945
Report Date: 10/08/98
Date Received: 09/25/98
Arrival Temperature: On Ice

Report Submitted By: HGC
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: TK 57

Project Number: 850-98E

Sample I.D. #: 213951 Sample Description: S-4c

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	78.4	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/03/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/03/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/03/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/03/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/03/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/03/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/03/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO

Sample I.D. #: 213952 Sample Description: SP-1

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	76.2	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	1.0	mg/kg		0.015	0.053	09/30/98	10/02/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	0.34	mg/kg		0.010	0.030	09/30/98	10/02/98	KMC	WDNR GRO
Benzene	0.68	mg/kg	V	0.009	0.029	09/30/98	10/02/98	KMC	WDNR GRO
Ethylbenzene	0.39	mg/kg		0.009	0.028	09/30/98	10/02/98	KMC	WDNR GRO
Gasoline Range Organics	14	mg/kg	K	1.3	4.5	09/30/98	10/02/98	KMC	WDNR GRO
m & p- Xylene	1.8	mg/kg		0.017	0.053	09/30/98	10/02/98	KMC	WDNR GRO
Methyl t-Butyl Ether	0.071	mg/kg	J	0.011	0.034	09/30/98	10/02/98	KMC	WDNR GRO
o-Xylene	0.66	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO
Toluene	2.0	mg/kg		0.008	0.026	09/30/98	10/02/98	KMC	WDNR GRO

Sample I.D. #: 213953 Sample Description: S-5

Date Sampled: 09/23/98

Analyte	Result	Units	Qualifier	LOD	LOQ	Date Extracted	Date Analyzed	Analyst	Method
Total Percent Solids	76.7	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/03/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/03/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/03/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/03/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/03/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/03/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/03/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO



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ANALYTICAL REPORT

Customer #: LT7000003487
Work Order: 9809000945
Report Date: 10/08/98
Date Received: 09/25/98
Arrival Temperature: On Ice

Report Submitted By: HGC
Record Reviewer

TWIN PORTS TESTING
IRVIN G. MOSSBERGER
1301 N THIRD ST
SUPERIOR, WI 54880

Note: None

Project Name: TK 57

Project Number: 850-98E

Sample I.D. #: 213954 **Sample Description:** S-6

Date Sampled: 09/23/98

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>LOD</u>	<u>LOQ</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>	<u>Method</u>
Total Percent Solids	76.4	%					09/28/98	EDO	EPA 5030
1,2,4-Trimethylbenzene	<0.025	mg/kg		0.015	0.053	09/30/98	10/03/98	KMC	WDNR GRO
1,3,5-Trimethylbenzene	<0.025	mg/kg		0.010	0.030	09/30/98	10/03/98	KMC	WDNR GRO
Benzene	<0.025	mg/kg		0.009	0.029	09/30/98	10/03/98	KMC	WDNR GRO
Ethylbenzene	<0.025	mg/kg		0.009	0.028	09/30/98	10/03/98	KMC	WDNR GRO
Gasoline Range Organics	<1.3	mg/kg		1.3	4.5	09/30/98	10/03/98	KMC	WDNR GRO
m & p- Xylene	<0.025	mg/kg		0.017	0.053	09/30/98	10/03/98	KMC	WDNR GRO
Methyl t-Butyl Ether	<0.025	mg/kg		0.011	0.034	09/30/98	10/03/98	KMC	WDNR GRO
o-Xylene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO
Toluene	<0.025	mg/kg		0.008	0.026	09/30/98	10/03/98	KMC	WDNR GRO



Commonwealth Technology, Inc.

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Data Qualifiers

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email: fyi@ctienv.com

- A Sample analyzed with a dilution. Surrogates were diluted outside the calibration range. Applies to all analytes for this method.
- B Analyte detected in associated Method Blank.
- C Sample result confirmed by alternate analysis.
- D Results reported from higher dilution.
- E Analyte concentration exceeded calibration range.
- F Unable to analyze due to sample matrix interference. Applies to all analytes for this method.
- G Insufficient sample for analysis. Applies to all analytes for this method.
- H Sample was received past the established holding time. Applies to all analytes for this method.
- I Sample was analyzed past the established holding time. Applies to all analytes for this method.
- J Reported concentration below the Quantitation Limit.
- K Sample contained lighter hydrocarbon fractions.
- L Sample contained heavier hydrocarbon fractions.
- M Matrix Spike and/or Matrix Spike Duplicate outside acceptance limits.
- O Hydrocarbons atypical of gasoline.
- P Hydrocarbons atypical of diesel #2 fuel.
- Q Laboratory Control Sample outside acceptance limits.
- S Surrogate outside acceptance limits. Applies to all analytes for this method.
- T Sample received exceeding proper preservation criteria. Applies to all analytes for this method.
- V Raised Quantitation Limit due to dilution for background interference. Applies to all analytes for this method.
- W Raised Quantitation Limit due to limited sample volume. Applies to all analytes for this method.
- Y Replicate outside acceptance limits.
- Z Calibration criteria exceeded.

- 1 Safe, No Total Coliform detected.
- 2 Unsafe, Total Coliform detected, no E. coli detected.
- 3 Unsafe, Total Coliform detected, E. coli detected.
- 4 Sample weight was below program minimum. Applies to all analytes for this method.
- 5 Insufficient oxygen depletion.
- 6 Complete oxygen depletion.
- 7 Sliding BOD, toxicity present in sample.

CTI Wisconsin Division Laboratory Certification #'s:

IA DNR: 146

KY Dept. of Environmental Protection: 90110

WI DNR: 157066030

DATCP: 289



No 5358

Is this a PECFA project? (Please indicate "Yes" or "No") No

SAMPLE COLLECTOR: <u>Irvin Mossberger</u>	COMPANY: <u>Twin Parts Testing</u>	TELEPHONE # (include area code): <u>(715) 392-7114</u>
PROJECT NUMBER: <u>850-98E</u>	PROJECT NAME: <u>TIC 57</u>	

I HEREBY CERTIFY THAT I RECEIVED, PROPERLY HANDLED, AND DISPOSED OF THESE SAMPLES AS NOTED BELOW:

INVOICE ADDRESS (must be completed): <u>B11 Gustafson, Murphy O.I., 2457 Shanon Ave, Superior, WI</u>	REPORT ADDRESS (must be completed): <u>Irvin Mossberger, Twin Parts Testing, 1301 N. 3rd St. Superior, WI 54880</u>
--	--

DATE & TIME OF RELINQUISHMENT: <u>9/24/98 9:45 am</u>	RELINQUISHED BY (signature): <u>Irvin Mossberger</u>	RECEIVED BY (signature): <u>D. Dill</u>	DATE / TIME OF RECEPTION: <u>9/25/98</u>
DATE & TIME OF RELINQUISHMENT:	RELINQUISHED BY (signature):	RECEIVED BY LABORATORY (signature):	DATE / TIME OF RECEPTION:

FIELD ID NUMBER	DATE COLLECTED	TIME COLLECTED	SAMPLE		PRESERV. TYPE	LOCATION / DESCRIPTION	TYPE OF ANALYSES REQUIRED (please circle)	LAB USE ONLY PROF. W/MOH? * IF YES	NO. / TYPE OF CONTAINERS	LAB I.D.
			TYPE	DEVICE						
S-1	9/23/98	2:30	Soil		MeOH	0.5'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213942
S-3	9/23/98	2:35	Soil		MeOH	1.0'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213943
B-11	9/23/98	2:40	Soil		MeOH	0.75'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213944
B-12	9/23/98	2:45	Soil		MeOH	1.5'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213945
B-14	9/23/98	11:33	Soil		MeOH	2.0'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213946
B-5	9/23/98	9:21	}			1.5'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213947
B-10		9:24				1.25'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213948
B-13		9:27				2.0'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213949
S-2d		10:29				0.75'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213950
S-4c		10:39				0.75'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213951
SP-1		9:20				—	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213952
S-5		11:10	}			1.0'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213953
S-6		12:10				1.0'	DRO GRO <u>GRO/PVOC</u> PVOC Pb Cd <u>SOLIDS</u> FLASHPOINT VOC-LUST VOC-8021 SIEVE #200 SIEVE PAINT FILTER PAH Other (please list):			213954

SAMPLE CONDITIONS / COMMENTS:

CHECKED

ARRIVAL TEMPERATURE

on ice