

~~Not on print-out~~
~~Not on data sheet~~

09-16-208510

PLEASE PR.

State of Wisconsin Substance Release Notification Form

24-Hour Emergency Hotline Number: 1-800-943-0003

Form 4400-91 Rev. 11

Date and Mil. Time of Incident	3/4/97 2:00pm	Date and Mil. Time Reported	3/4/97 2:45pm
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Person Reporting	David stultz	Telephone # (715)	398-3533
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Representing Agency, Firm, or Citizen	Murphy Oil
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Responsible Party	Mechanical failure
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Contact Name	Bill Gustfson	Telephone # (715)	398-3533
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Address	2407 Stinson Avenue	City, State, Zip Code	Superior WI 54880
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Substance Involved	#6 Fuel Oil	Amount & Units Released	45 Gallons	Amt. Recovered	Recovering and Reprocessing	Is this a 304 (11004-42 USC) spill?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
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<input type="checkbox"/> Solid	<input type="checkbox"/> Semisolid	<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Gas	Color	Black	Odor	very little
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Exact Location (inc. address, facility name, mileage, bldg. #, etc.)	Transfer pump on storage tank number 52 inside the refinery		
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City	Superior	County	Douglas	Lat/long	
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DNR Region	16	Sec.	T	NR	(E/W)	Weather Cond.	
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Cause of Incident	A gasket broke and leaked the oil out		
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Spilled Substance Impact To: Check (✓) all that apply <input type="checkbox"/> Air <input type="checkbox"/> Potential <input type="checkbox"/> Soil <input 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 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 type="checkbox"/> Gas/Service Station/Garage/Auto Dealer, Repair Shop <input 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 type="checkbox"/> Cleanup Method: _____ <input type="checkbox"/> Waste Destination: _____ <input type="checkbox"/> Containment <input checked="" type="checkbox"/> Contractor Hired Name: Ceda Vacuum truck <input type="checkbox"/> Other: _____
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Injuries? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, how many? _____	Has an evacuation occurred? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Potential? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	--

Are there any resource damages? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No What kinds? soil
--

Other Agencies Notified (✓ first column if notified); Check (✓) both columns if on scene <input type="checkbox"/> Fire Department/Hazmat <input 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) Elvirra Garcia (Sign) _____ Date: 3/4/97	Rpt'd to DATCP? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Person Notified: _____	Region Notified: _____	Time: _____	Date: _____
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Invstgtd By:(Print) _____ (Sign) _____	Date: _____	Site Closed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Spill Coordinator Signoff: _____	Date: _____	Transferred to ERP? <input type="checkbox"/> No	NFA Letter Sent? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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March 6, 1997

RECEIVED

MAR 10 1997

DNR - SPOONER

Mr. James A. Hosch
Northwest District Spills Coordinator
Department of Natural Resources
Hwy. 70 West
P.O. Box 309
Spooner, WI 54801

RE: No. 6 Fuel Oil Release
Tank 52 Dike Area

Dear Mr. Hosch:

This letter is to provide details of the release of No. 6 fuel oil that occurred March 4, 1997, at approximately 1400 hours. As reported in the original notification made by telephone to the WDNR, the release was a result of the failure of a gasket on the discharge flange of a rail car loading pump. This pump is located within the dike containment area of tank #52.

The amount of material was estimated to be 45 gallons. All released materials were contained within the dike area of the tank. At no time was there any possibility of this material contacting ground water or of the material moving off site. At the time of the spill, the site was covered with snow and the clay soil under the snow was frozen to several feet below grade. No. 6 fuel oil is a heavy, viscous material that is normally stored at 200 F, or higher. Upon contact with the snow, the material cooled off and set up, which contributed to the containment of this material in a small area and helped prevent the penetration of even the surface soils.

This tank is located on the refinery property which is at 2407 Stinson Avenue, Superior, WI. The map coordinates for the refinery are NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sect. 36, T 49N, R 14N.

Clean-up activities commenced immediately after discovery of the release. The spilled material and the snow that it contacted were collected and reintroduced into the refinery processing equipment by way of the #1 API Separator. This allows the fuel to be recovered through the refinery's slop oil system and the water from the melted snow to be processed through the refinery's waste water treatment plant. The spill location

Mr. James A. Hosch
March 6, 1997
Page Two

around the pump inside the diked area is congested with piping. We have removed the #6 fuel oil (which all had congealed due to the cold weather conditions) and associated snow and ice. As we have discussed in the past, our usual practice is to remove 4 - 6 inches of soil as a precaution. Because the ground is frozen solid, it has been more difficult and time consuming to remove this top layer of soil from underneath the pipe racks. As of this writing, clean-up activities are still in progress.

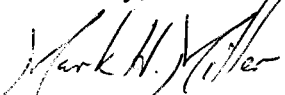
With the soil frozen, penetration into the soil from the spilled materials beyond the immediate surface level of the soil will not occur. However, in an effort to eliminate the possibility that materials are left in contact with the soil, the top layer of soil will be removed up to 4-6 inches in depth. The amount of soil to be excavated is estimated to be 4-5 yards.

The excavated materials will be stored in the contaminated soil storage building until arrangements for disposition are made. Typically, contaminated soils are disposed of at a local asphalt plant in an asphalt roaster.

Due to the existing site conditions, the type of material and quantity involved, and the immediate clean-up and ongoing remedial response at the site, Murphy Oil USA believes that obligations and requirements under the pertinent NO 700 series Wisconsin Administrative Code standards will have been met at the completion of the planned remediation activities. The WDNR will be notified of any additional actions taken after completion of the present clean-up activities if the site conditions under the removed materials appear to warrant additional measures.

Please contact me at (715)398-3533 if you have any questions or comments in this regard.

Sincerely,



Mark H. Miller
Manager, Safety and Environmental Control

mm.100

cc: R. Lewandowski
L. Vail
W. Compton
J. Kowitz



SUPERIOR REFINERY
P O BOX 2066
SUPERIOR WISCONSIN 54880

July 7, 1997

RECEIVED
JUL 11 1997
DNR SUPERIOR

Mr. James A. Hosch
Wisconsin Department of Natural Resources
1705 Tower Avenue
Superior, WI 54880

RE: No. 6 Fuel Oil Releases
Tank 51 & 52 Dike Area

Dear Mr. Hosch:

This letter is to provide additional information on the site clean-up for releases of No. 6 fuel oil that occurred last winter. Written notification of the releases and a summary of Murphy Oil's immediate actions taken were transmitted to you on March 6, 1997, April 4, 1997, and April 30, 1997.

At the time of year the spills occurred, the soil was frozen and completion of our remediation efforts was subsequently delayed until late spring and early summer. As discussed in the earlier correspondence, MOUSA's typical practice for spills that occur on frozen soil is to remove all free oil for recovery and reintroduction into the process and to remove approximately six inches of soil under the contaminated area, although the hydrocarbons normally do not penetrate the frozen soil. Due to the location of some of the released materials, it was not feasible to remove the frozen soil from the area at the time of the release.

As discussed in the previous correspondence, the releases that occurred primarily resulted from mechanical problems with the transfer pumps that are located within the dike containment area, MOUSA has replaced these pumps in an effort to minimize the potential for similar mechanical failures in the future. As part of the installation, a concrete containment pad was included around the pumps to capture any materials that are released before they contact the soil. The remediation effort was delayed until installation of the new pumps was in progress since soil from the previous spill areas would be removed for construction of the new pump foundations.

As of this writing, all soils that were beneath the spilled materials have been removed to a minimum of the six inches that are normally removed from spill areas that occur on



Mr. James Hosch

July 7, 1997

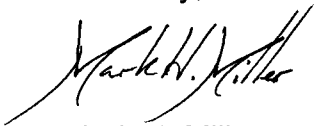
Page Two

frozen soil and the site has been cleaned to the extent practicable for this site and release conditions. The soils will be disposed of at a local asphalt plant in a soil roaster.

Due to the existing site conditions, the type of material and quantity involved, and the immediate clean-up and follow-up remedial response at the site, Murphy Oil USA believes that obligations and requirements under the pertinent NR 700 series Wisconsin Administrative Code standards have been met.

Please contact me at (715) 398-8255 if you have any questions or comments in this regard.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark H. Miller". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.

Mark H. Miller

Manager, Safety and Environmental Control

mm112

cc: Fred Green
Jim Kowitz
Rick Lewandowski

**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 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 s. 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 MURPHY OIL U.S.A. Site LD. # (for DNR use only)

Site Address 2700 STINSON AVE. Contact Name MR. BILL GUSTAFSON

City, State, Zip Code SUPERIOR, WI 54880 1/4, 1/4, Section, Township, and Range NE 1/4, NW 1/4, SEC. 36, T49N, R14W

The information on this form is accurate to the best of my knowledge.
Signature of Soil Generator Mal 10/8 FOR BILL GUSTAFSON Telephone Number (include area code) (715) 398-3533

Consulting Firm TWEN PORTS TESTING Contact MARK DARBY Telephone Number (218) 722-1911

Estimated Volume Contaminated Soil 280 Tons (cubic yards) (circle one) Soil Type (USCS)

Type of Petroleum Contamination (Circle):

Gasoline Diesel Fuel/#2 Fuel Oil

Other "HEAVY" OIL Distance to Nearest Residence/Business 1 MILE

Contaminant concentration:

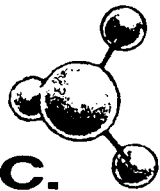
One screened sample for each 15 yds³ and one laboratory analysis for each 300 yds³ of contaminated soil when the field instrument registers contamination OR one laboratory analysis for each 100 yds³ when the field instrument does not register contamination on soil shown to be contaminated during the 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) 0.010192 lbs

Total Petroleum Hydrocarbons ^{DRO} (TPH) in soil to be remediated (attach calculations) 2,203.07 lbs

Total TPH as DRO

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) 722-6653 • FAX (218) 722-3295

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

ok 9-19-97 PSH.

CO: AM/7-SLR

WUST - Rhineland

September 18, 1997
TPT# 769-97E.MM

Wisconsin Department of Natural Resources
1705 Tower Avenue
Superior, Wisconsin 54880
Attn: Ms. Phyliss Holmbeck

RECEIVED

SEP 18 1997

DNR SUPERIOR

Re: Soil Treatment Application for
Soil Excavated from Tanks 51 and 52 at
Murphy Oil U.S.A in Superior, Wisconsin

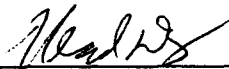
Dear Ms. Holmbeck:

Enclosed is the application to thermally treat approximately 280 cubic yards of petroleum contaminated soil from Tanks 51 and 52 at Murphy Oil's facility. The petroleum contamination is "heavy oil" which appears to be similar to #6 oil. The composite sample collected from the stockpile was analyzed for DRO, VOCs and, RCRA metals.

If you have any questions or need any additional information, please feel free to call me at (218) 722-1911.

Sincerely,

TWIN PORTS TESTING, INC.


Mark Darby, Project Manager

722-1911

EMISSION CALCULATIONS
CONTAMINATED SOIL EXCAVATED FROM
TANKS 51 AND 52 AT
MURPHY OIL USA
SUPERIOR, WISCONSIN

BENZENE CALCULATION:

Composite 1 = <0.013 ppm for benzene ✓

Det limit ✓

$$\frac{0.013 \text{ ppm}}{1,000,000 \text{ ppm}} \times \frac{2,800 \text{ lbs.}}{\text{yd}^3} \times 280 \text{ yd}^3 = 0.010192 \text{ lbs. of benzene}$$

DRO CALCULATION:

Composite 1 = 2,810 ppm for DRO ✓

$$\frac{2,810 \text{ ppm}}{1,000,000 \text{ ppm}} \times \frac{2,800 \text{ lbs.}}{\text{yd}^3} \times 280 \text{ yd}^3 = 2,203.04 \text{ lbs. of DRO}$$

THE SOIL VAPOR READING FOR SOIL SAMPLE COMPOSITE 1 WAS 32 PPM
USING A MODEL 580 OVM EQUIPPED WITH A 10.6 eV LAMP.

330 SO. CLEVELAND ST.
P.O. BOX 349
CAMBRIDGE, MN 55008

MIDWEST ANALYTICAL SERVICES

MINNESOTA CERTIFIED LABORATORY
NUMBER 027-059-156



LAB
METRO
FAX

(612) 689-2175
(612) 444-9270
(612) 689-3660

September 9, 1997

Mark Darby
Twin Ports Testing
728 Garfield Avenue
Duluth, MN 55802

Project ID: 769-97E.MM

Chain of Custody: 22383

Date Sampled: 08-18-97

Date Received: 08-19-97

Sample Identification:

Lab ID: 19473 Composite 1

19474 Trip Blank

Matrix:

Soil

Water

Samples were analyzed for DRO by the Wisconsin Modified DRO procedure and for VOC by Method 8021. The results are reported on the following pages.

Sincerely,

A handwritten signature in cursive that reads "Lon Jones" followed by the date "9/9".

Lon Jones
Organic/Bio Group Leader

A handwritten signature in cursive that reads "Brian Anderson".

Brian Anderson
Inorganic Group Leader

MIDWEST ANALYTICAL SERVICES

September 9, 1997

Page 2

COC 22383

Date Analyzed: 08-26-97

Parameter:	Total Hydrocarbons as DRO	Percent Moisture
Units:	(mg/kg)	(%)
MDL:	10.0	
19473 Composite 1	2810	7.4

Parameter	19473 Composite 1	Date Analyzed
Arsenic (mg/kg db)	< 47.0	09-09-97
Barium* (mg/kg db)	105	09-09-97
Cadmium (mg/kg db)	4.97	09-09-97
Chromium (mg/kg db)	40.5	09-09-97
Lead (mg/kg db)	22.5	09-09-97
Mercury (mg/kg db)	0.135	09-05-97
Selenium (mg/kg db)	< 4.70	09-09-97
Silver (mg/kg db)	< 0.750	09-09-97

BDL = Below Detection Limit, MDL = Method Detection Limit

* = Barium was inadvertently missed for sample matrix spike. The matrix spike was performed for this batch on a subsequent analytical run.

MIDWEST ANALYTICAL SERVICES

September 9, 1997

Page 3

COC 22383

Date Analyzed: 08-26-97

Lab ID:	MDL (mg/kg)	19473 Composite 1 (mg/kg)
Dichlorodifluoromethane	0.005	BDL
Chloromethane	0.010	BDL
Vinyl chloride	0.008	BDL
Bromomethane	0.010	BDL
Chloroethane	0.010	BDL
Dichlorofluoromethane	0.010	BDL
Trichlorofluoromethane	0.013	BDL
Ethyl ether	0.015	BDL
Acetone	0.008	BDL
1,1-Dichloroethene	0.013	BDL
Methylene chloride	0.015	BDL
Allyl chloride	0.010	BDL
Trichlorotrifluoroethane	0.025	BDL
Methyl tert-butyl ether	0.008	BDL
trans-1,2-Dichloroethene	0.010	BDL
1,1-Dichloroethane	0.008	BDL
Methyl ethyl ketone	0.070	BDL
cis-1,2-Dichloroethene	0.008	BDL
Bromochloromethane	0.005	BDL
Chloroform	0.005	BDL
2,2-Dichloropropane	0.020	BDL
Tetrahydrofuran	0.015	0.077
1,2-Dichloroethane	0.008	BDL
1,1,1-Trichloroethane	0.010	BDL
1,1-Dichloropropene	0.008	BDL
Carbon tetrachloride	0.010	BDL
Benzene	0.013	BDL
Dibromomethane	0.008	BDL
1,2-Dichloropropane	0.008	BDL
Trichloroethene	0.008	BDL
Bromodichloromethane	0.010	BDL
cis-1,3-Dichloropropene	0.008	BDL
Methyl isobutyl ketone	0.018	0.040
trans-1,3-Dichloropropene	0.005	BDL

BDL = Below Detection Limit, MDL = Method Detection Limit

MIDWEST ANALYTICAL SERVICES

September 9, 1997

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COC 22383

Date Analyzed: 08-26-97

Lab ID:	MDL (mg/kg)	19473 Composite 1 (mg/kg)
1,1,2-Trichloroethane	0.008	BDL
Toluene	0.010	0.530
1,3-Dichloropropane	0.008	BDL
Dibromochloromethane	0.008	BDL
1,2-Dibromoethane	0.020	BDL
Tetrachloroethene	0.010	BDL
1,1,1,2-Tetrachloroethane	0.035	BDL
Chlorobenzene	0.010	BDL
Ethylbenzene	0.010	0.532
m- and p-Xylene	0.013	2.085
Bromoform	0.013	BDL
Styrene	0.013	0.293
O-Xylene	0.008	1.045
1,1,1,2-Tetrachloroethane	0.010	BDL
1,2,3-Trichloropropane	0.013	BDL
Isopropyl benzene	0.018	1.885
Bromobenzene	0.005	BDL
n-Propyl benzene	0.020	1.092
2-Chlorotoluene	0.008	BDL
4-Chlorotoluene	0.008	BDL
1,3,5-Trimethylbenzene	0.005	2.968
tert-Butyl benzene	0.015	1.216
1,2,4-Trimethylbenzene	0.018	8.373
sec-Butyl benzene	0.013	2.786
1,3-Dichlorobenzene	0.010	BDL
1,4-Dichlorobenzene	0.010	BDL
p-Isopropyl toluene	0.010	1.937
1,2-Dichlorobenzene	0.013	BDL
n-Butyl benzene	0.008	6.573
1,2-Dibromo-3-chloropropane	0.010	BDL
1,2,4-Trichlorobenzene	0.013	BDL
Naphthalene	0.018	8.220
Hexachlorobutadiene	0.013	BDL
1,2,3-Trichlorobenzene	0.005	BDL

MIDWEST ANALYTICAL SERVICES

September 9, 1997

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COC 22383

Date Analyzed: 08-26-97

Lab ID:	MDL/PQL (µg/L)	19474 Trip Blank (µg/L)
1,1,2-Trichloroethane	0.3/3.0	BDL
Toluene	0.4/4.0	BDL
1,3-Dichloropropane	0.3/3.0	BDL
Dibromochloromethane	0.3/3.0	BDL
1,2-Dibromoethane	0.8/8.0	BDL
Tetrachloroethene	0.4/4.0	BDL
1,1,1,2-Tetrachloroethane	1.4/14.0	BDL
Chlorobenzene	0.4/4.0	BDL
Ethylbenzene	0.4/4.0	BDL
m- and p-Xylene	0.5/5.0	BDL
Bromoform	0.5/5.0	BDL
Styrene	0.5/5.0	BDL
O-Xylene	0.3/3.0	BDL
1,1,2,2-Tetrachloroethane	0.4/4.0	BDL
1,2,3-Trichloropropane	0.5/5.0	BDL
Isopropyl benzene	0.7/7.0	0.7e
Bromobenzene	0.2/2.0	BDL
n-Propyl benzene	0.8/8.0	1.4e
2-Chlorotoluene	0.3/3.0	BDL
4-Chlorotoluene	0.3/3.0	BDL
1,3,5-Trimethylbenzene	0.2/2.0	BDL
tert-Butyl benzene	0.6/6.0	BDL
1,2,4-Trimethylbenzene	0.7/7.0	1.5e
sec-Butyl benzene	0.5/5.0	1.4e
1,3-Dichlorobenzene	0.4/4.0	BDL
1,4-Dichlorobenzene	0.4/4.0	BDL
p-Isopropyl toluene	0.4/4.0	1.4e
1,2-Dichlorobenzene	0.5/5.0	BDL
n-Butyl benzene	0.3/3.0	0.8e
1,2-Dibromo-3-chloropropane	0.4/4.0	BDL
1,2,4-Trichlorobenzene	0.5/5.0	BDL
Naphthalene	0.7/7.0	1.4e
Hexachlorobutadiene	0.5/5.0	BDL
1,2,3-Trichlorobenzene	0.2/2.0	BDL

BDL = Below Detection Limit, MDL = Method Detection Limit, PQL = Practical Quantitation Limit
 e = Value falls between MDL and PQL

MIDWEST ANALYTICAL SERVICES

September 9, 1997

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COC 22383

Date Analyzed: 08-26-97

Lab ID:	MDL/PQL (µg/L)	19474 Trip Blank (µg/L)
Dichlorodifluoromethane	0.2/2.0	BDL
Chloromethane	0.4/4.0	BDL
Vinyl chloride	0.3/3.0	BDL
Bromomethane	0.4/4.0	BDL
Chloroethane	0.4/4.0	BDL
Dichlorofluoromethane	0.4/4.0	BDL
Trichlorofluoromethane	0.5/5.0	BDL
Ethyl ether	0.6/6.0	BDL
Acetone	0.3/3.0	BDL
1,1-Dichloroethene	0.5/5.0	BDL
Methylene chloride	0.6/6.0	BDL
Allyl chloride	0.4/4.0	BDL
Trichlorotrifluoroethane	1.0/10.0	BDL
Methyl tert-butyl ether	0.3/3.0	BDL
trans-1,2-Dichloroethene	0.4/4.0	BDL
1,1-Dichloroethane	0.3/3.0	BDL
Methyl ethyl ketone	2.8/28.0	BDL
cis-1,2-Dichloroethene	0.3/3.0	BDL
Bromochloromethane	0.2/2.0	BDL
Chloroform	0.2/2.0	BDL
2,2-Dichloropropane	0.8/8.0	BDL
Tetrahydrofuran	0.6/6.0	BDL
1,2-Dichloroethane	0.3/3.0	BDL
1,1,1-Trichloroethane	0.4/4.0	BDL
1,1-Dichloropropene	0.3/3.0	BDL
Carbon tetrachloride	0.4/4.0	BDL
Benzene	0.5/5.0	BDL
Dibromomethane	0.3/3.0	BDL
1,2-Dichloropropane	0.3/3.0	BDL
Trichloroethene	0.3/3.0	BDL
Bromodichloromethane	0.4/4.0	BDL
cis-1,3-Dichloropropene	0.3/3.0	BDL
Methyl isobutyl ketone	0.7/7.0	1.5e
trans-1,3-Dichloropropene	0.2/2.0	BDL

BDL = Below Detection Limit, MDL = Method Detection Limit, PQL = Practical Quantitation Limit

e = Value falls between MDL and PQL

