

**State of Wisconsin Substance Release Notification Form**  
**Department of Natural Resources Form 4400-91 (Rev. 12-04, e-form)**  
**24-Hour Emergency Hotline Number: 1-800-943-0003**

<b>Date &amp; Military Time of Incident:</b> 04/01/2006 1120hrs		<b>Date &amp; Military Time Reported:</b> 04/01/2006 1710hrs		<b>Spill File #</b> NOR04012006 1 <b>BRRTS #</b> 04-16-598151	
<b>Person Reporting:</b> DAVID BEATTIE		<b>Representing:</b> MURPHY OIL COMPANY		<b>Phone #</b> 715-398-3533 <b>Fax #</b> 8455	
<b>Responsible Party (RP) / Spiller:</b> MURPHY OIL COMPANY		<b>RP Decision Based On:</b>		<b>Phone #</b> <b>Fax #</b>	
<b>RP Address:</b> 2400 STINSON AVE.				<b>City State Zip Code</b> SUPERIOR WI 54880-	
<b>RP Contact Name &amp; Title:</b> David Beattie				<b>Phone #</b> 715-398-8455 <b>Fax #</b>	
<b>Substance Involved:</b> GASOLINE		<b>Amount &amp; Units Released:</b> 100 GALLONS		<b>Amount &amp; Units Recovered:</b> 90-95 GALLONS	
<input type="checkbox"/> Solid <input type="checkbox"/> Semisolid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas		Color:		Odor:	
<b>Exact Location Of Incident: (including street name, bldg. #, mileage, etc.)</b> 2400 STINSON AVE. - Tank 57 north side by tank mixer				<b>Facility Name / Property Owner:</b>	
<input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township SUPERIOR		County DOUGLAS		Latitude/Longitude deg. ' " , deg. ' "	
<b>DNR Region:</b> NOR		1/4 1/4 Sec 36 T 49 N R 14 <input type="checkbox"/> E <input checked="" type="checkbox"/> W		<b>Weather Conditions:</b>	
<b>Cause of Incident:</b> LEAK ON TO THE GROUND AND INTO A SECONDARY CONTAINER FROM A TANK MIXER DUE TO EQUIPMENT FAILURE.					
<b>Spilled Substance Impact To: (check X all that apply)</b> <input type="checkbox"/> Air <input type="checkbox"/> Potential <input checked="" type="checkbox"/> Concrete/Asphalt <input type="checkbox"/> Potential <input type="checkbox"/> Contained/Recovered <input type="checkbox"/> Groundwater <input type="checkbox"/> Potential <input type="checkbox"/> Private Well <input type="checkbox"/> Potential <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Potential <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Storm Sewer <input type="checkbox"/> Potential <input type="checkbox"/> Surface Water <input type="checkbox"/> Potential Name: <input type="checkbox"/> Other:		<b>Spill Cause and/or Site:</b> <input type="checkbox"/> Ag Coop/Food Factory <input type="checkbox"/> Airport Facility <input type="checkbox"/> Railroad Facility <input type="checkbox"/> Construction, Excavation, Wrecking, Quarry, Mine <input type="checkbox"/> Gas/Service Station/Garage/Auto Dealer/Repair Shop <input type="checkbox"/> Hydraulic Line Break <input checked="" type="checkbox"/> Industrial Facility <input type="checkbox"/> Paper Mill <input type="checkbox"/> Chemical Co. <input type="checkbox"/> Pipeline/Terminal/Tank Farm/Oil Jobber/Wholesaler <input type="checkbox"/> Private Property (home/farm) <input type="checkbox"/> Public Property (city, state, church, school, etc.) <input type="checkbox"/> Transportation Accident, Fuel Tank Spill <input type="checkbox"/> Transportation Accident, Load Spill <input type="checkbox"/> Utility Co. Power Generating/Transfer Facility <input type="checkbox"/> Other:		<b>Action Taken By Spiller:</b> <input checked="" type="checkbox"/> Cleanup Method: <input type="checkbox"/> Absorbent <input checked="" type="checkbox"/> Excavation 50 yds soil <input checked="" type="checkbox"/> PUMP TRUCK <input type="checkbox"/> Containment <input checked="" type="checkbox"/> Contractor Hired Name: WALKER CENTERFUSE <input type="checkbox"/> Monitor <input type="checkbox"/> No Action Needed <input type="checkbox"/> No Action Taken <input checked="" type="checkbox"/> Waste Destination: WM - MN <input type="checkbox"/> Other: Voyager Disposal Canyon	
<b>Injuries?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes how many?		<b>Has An Evacuation Occurred?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Potential?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Are There Any Resource Damages?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Potential <b>What Kind?</b>					
<b>Other Agencies Notified: (check first column, if notified; check both columns, if on the scene)</b> <input type="checkbox"/> Fire Department <input checked="" type="checkbox"/> Local DNR <input type="checkbox"/> EPA <input type="checkbox"/> Local Law Enforcement <input checked="" type="checkbox"/> Div. Emerg. Mgt. <input type="checkbox"/> Nat'l Resp Ctr 800-442-8802 <input type="checkbox"/> LEPC or Local Emer. Mgt. <input type="checkbox"/> Coast Guard <input type="checkbox"/> Chemtrec 800-424-9300 <input type="checkbox"/> Level A/Level B Team <input type="checkbox"/> DHFS 608-258-0099 <input type="checkbox"/> Other:				<b>Incident Commander:</b>  <b>Phone #</b>	
<b>Prepared By:</b> MATTHEW KECKER		Phone # 608-267-0844		Date: 04/01/2006	
<b>Person Notified:</b> NORM DUNBAR VIA		Phone #		Date: 04/01/2006 Time: 2041	
<b>Investigated By:</b>		Sign:		Date:	
<b>Spill Coordinator Signoff:</b> Norman Dunbar				Date: 4/25/06	
				NFA Letter Sent? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Date: 4/25/06 Incident Closed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Date:	
<input type="checkbox"/> See Additional Comments On Reverse (Please, print page 2 of 2)					

<b>Date and Military Time Of Incident:</b> hrs	<b>Responsible Party:</b>
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**Additional Comments :**

**Case Activity Report:**  Yes  No CAR#: \_\_\_\_\_ (Please, attach copy of all CAR and other documentation)

**Enforcement Action:**  Yes  No (Explain Below)

**Dunbar, Norman C**

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**From:** Dave\_Beattie@murphyoilcorp.com  
**Sent:** Friday, April 21, 2006 11:16 AM  
**To:** Dunbar, Norman C  
**Subject:** Fw: Lab Report - L241703  
**Attachments:** L241703.pdf; COCL241703.pdf

Hi Norm:

Attached is the lab report for the samples we talked about the other day. Looks like all the GRO's are really low and it didn't seem there were any real big hits on anything else.

Please let me know if you have any questions and what our next step should be.

Thanks  
Dave

*(See attached file: L241703.pdf)*

*(See attached file: COCL241703.pdf)* -- This e-mail and all attachments is confidential and may contain legally privileged information intended solely for the use of the addressee. If you are not the intended recipient, you are hereby notified that reading or any other use of this message is unauthorized. Any views or opinions expressed in this message are solely those of the author, and do not necessarily reflect those of Murphy Oil Corporation or any of its subsidiaries.

04/21/2006

**Dunbar, Norman C**

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**From:** Dave\_Beattie@murphyoilcorp.com  
**Sent:** Wednesday, April 19, 2006 9:44 AM  
**To:** Dunbar, Norman C  
**Subject:** Tk 57 Gasoline Mixer Spill Update  
**Attachments:** TK 57 Clean Up.pdf

Hi Norm:

Just wanted to let you know that we have finished removing the impacted soil from the Tk57 gasoline spill(assuming the samples come back clean). We removed approx. 50 yds of soil, which I am hoping was more than enough so we don't have to go back in and take more soil out, as we put a few yards of clean soil back in around the tank ring wall to ensure support for the tank. The TVA(toxic vapor analyzer) we used to screen the soil had very low readings at the sample points, so I am hoping we got it all.

If you have any questions please let me know. Hopefully I will have sample results back early next week and we can get the site closed and filled back in.

Attached is a site diagram and some of the readings from the soil screening. A lot of the contaminated soil we could clearly see by just looking at it, so I only took a few actual readings of the contaminated stuff. Besides the sample right underneath the mixer, the samples were taken just above where the sidewall from the dig met the bottom of the dig in each area.

Thanks  
Dave

*(See attached file: TK 57 Clean Up.pdf)*

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04/19/2006



**Hazardous Substance Discharge Notification Form - NR 706.05**

Murphy Oil USA, Inc. - Superior Refinery

2407 Stinson Ave., Superior, WI 54880

Phone: (715) 398-3533 Fax: (715) 398-8209

Refinery Map Coordinates: NW1/4, NW1/4, Sect. 36, T 49N, R 14N.

1) Reporting Information

Name: Dave Beattie  
Date: 4/1/06

Phone: 715-398-8455  
Position: Env. Engineer

2) Discharge Information

Date: 4/1/06

Time: Start 11:00 approx

Amount Released: approx 100 gallons

Duration: 20 minutes / still going but vac truck

Material/Product: Gasoline

Response Time: 15 minutes on scene vacate

Specific Location: R57 tank + dyke

How was spill detected: Head pumper discovered when going to check on tank level. it out of mixer catch basin

Cause: Mixer leak, overwhelmed containment  
Leak still going until being caught in plastic top and vacuumed up,  
leak done at 4:30. If necessary, continue on back

3) Additional Information

Physical Characteristics (i.e. solid, liquid or gas): Gasoline, liquid, some  
gasoline vapors as well.

Chemical Properties: Low Flash Point, Volatile

Possible Hazards: Fire, Inhalation of Benzene

Immediate Corrective Action/Clean-up: Vac truck, called out Emerg. Response  
team. Vacuumed up any liquid (gas + water) we could.

People/Companies Performing the Action: Walker Centrifuge, Murphy responders  
S.O.S. trying to push leak stopper into mixer where its leaking. Done leaking @

Speed and Movement of Discharge(if any): None, All within tank dyke. 4:30  
Dyke drain closed

Actual/Potential Impacts to Human Health(if any): Immediately - explosion,  
gasoline vapors (Benzene)

Actual/Potential Impacts to Environment(if any): some dirt to remove.

Weather Conditions(i.e. precipitation, wind speed and direction): 43° and sunny.  
Wind out of East @ 10-15 mph

Agencies On-scene During Spill(if any): \_\_\_\_\_

Further action needed(if any): Leak stopped at 4:30 pm with leak stopper

Amount reaching Navigable Waters: None.

Total Oil Storage Capacity of Tanks/Lines Material was Discharged From: 89,000 bbls.

Adequate Secondary Containment: Yes

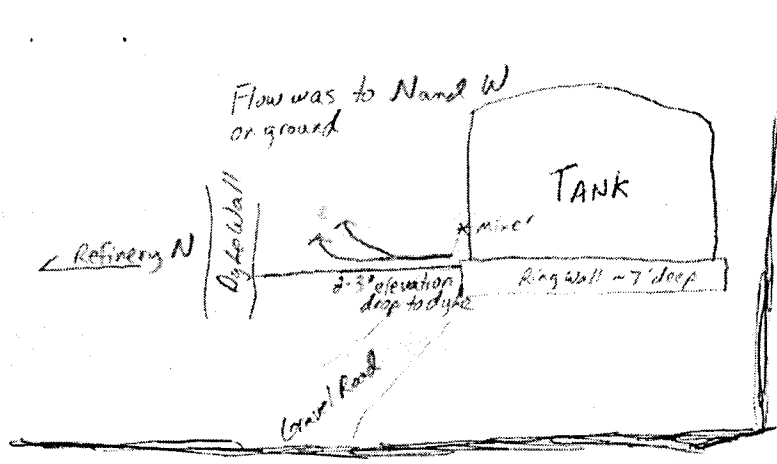
Steps taken to Reduce Possibility of Recurrence: Fix Mixer

Enforcement Actions(if any): \_\_\_\_\_

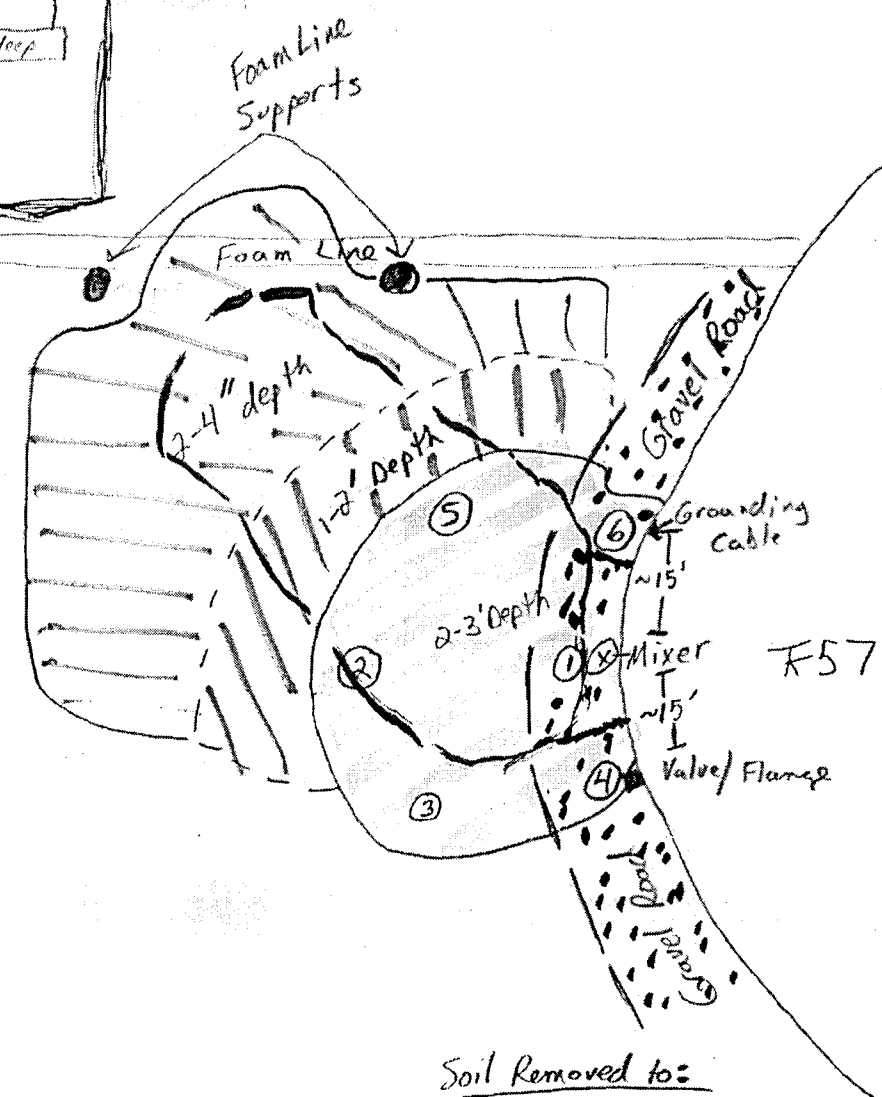
Effectiveness of Monitoring Equipment(if any): \_\_\_\_\_

Original: Refinery Manager CC: Operations Manager, Environmental Manager

When completed, FAX to (715) 365-8932 attn. - RR Program Assist



Refinery N  
 True N  
 Drawing not to scale  
 Measurements are estimated

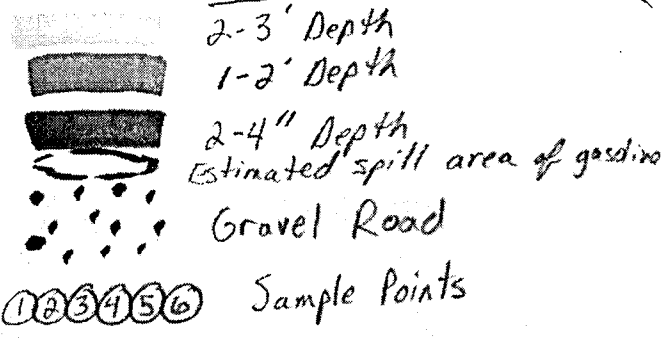


Notes:

- Sample pt. ① was sandy, rest were clay
- Removed top soil down to clay in green area
- Removed top soil and about 1/2" of clay in red area
- Removed top soil, gravel, and ~1'-1.5' clay in yellow area
- \* Contamination seemed to stop at clay
- \* Contamination went down further closer to the tank as it was mostly gravel and sandy material
- \* Removed approx. 50 yds of soil to ensure everything was cleaned up.
- \* Removed soil all the way to concrete (3' depth) along ring wall area. Ring wall ~7' deep

Samples taken where sidewall meets the base

Soil Removed to:



- ① 3' down directly under mixer
- ② 1.5-2' down 15' refinery N of mixer
- ③ 1.5-2' down 15' West + 15' North of mixer
- ④ 2.5-3' down 15' West of mixer
- ⑤ 1.5-2' down 15' East + 15' North of mixer
- ⑥ 2.5-3' down 15' East of mixer





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Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

Murphy Oil Company  
David Beattie  
2407 Stinson Avenue  
Superior, WI 54880

Quality Assurance Report  
Level II  
L241703

April 21, 2006

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.





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Quality Assurance Report  
Level II  
L241703

April 21, 2006

Ethylbenzene mg/kg 1.29 0.00 .05 103. 80-120 L241388-07 WG247182

Analyte	Units	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res					
m&p-Xylene	mg/kg	2.52	0.00	.1	101.	80-120	L241388-07	WG247182
Methyl tert-butyl ether	mg/kg	1.36	0.00	.05	109.	80-120	L241388-07	WG247182
Naphthalene	mg/kg	1.13	0.00	.05	90.0	80-120	L241388-07	WG247182
o-Xylene	mg/kg	1.28	0.00	.05	103.	80-120	L241388-07	WG247182
Toluene	mg/kg	1.21	0.00	.05	97.0	80-120	L241388-07	WG247182
GRO	mg/kg	14.6	0.00	2.2	27.0	80-120	L241388-07	WG247182

Analyte	Units	Matrix Spike Duplicate		RPD	Limit	%Rec	Ref Samp	Batch
		MSD Res	Ref Res					
1,2,4-Trimethylbenzene	mg/kg	1.25	1.22	2.54	20	100.	L241388-07	WG247182
1,3,5-Trimethylbenzene	mg/kg	1.33	1.30	2.55	20	106.	L241388-07	WG247182
Benzene	mg/kg	1.33	1.31	2.10	20	107.	L241388-07	WG247182
Ethylbenzene	mg/kg	1.32	1.29	2.38	20	106.	L241388-07	WG247182
m&p-Xylene	mg/kg	2.58	2.52	2.24	20	103.	L241388-07	WG247182
Methyl tert-butyl ether	mg/kg	1.39	1.36	2.30	20	112.	L241388-07	WG247182
Naphthalene	mg/kg	1.20	1.13	6.14	20	96.0	L241388-07	WG247182
o-Xylene	mg/kg	1.31	1.28	2.42	20	105.	L241388-07	WG247182
Toluene	mg/kg	1.24	1.21	2.48	20	99.0	L241388-07	WG247182
GRO	mg/kg	14.5	14.6	0.228	20	26.0	L241388-07	WG247182

Batch number /Run number / Sample number cross reference

WG247025: R272318: L241703-01  
WG247026: R272319: L241703-02 03 04 05 06  
WG247182: R272424: L241703-01 02 03 04 05 06

\* \* Calculations are performed prior to rounding of reported values .



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David Beattie  
2407 Stinson Avenue  
Superior, WI 54880

Quality Assurance Report  
Level II  
L241703

April 21, 2006

Analyte	Result	Laboratory Blank		Date Analyzed	Batch
		Units			
Total Solids	0.00	%		04/20/06 09:31	WG247025
Total Solids	0.00	%		04/20/06 09:35	WG247026
1,2,4-Trimethylbenzene	< .001	mg/kg		04/20/06 08:28	WG247182
1,3,5-Trimethylbenzene	< .001	mg/kg		04/20/06 08:28	WG247182
Benzene	< .0005	mg/kg		04/20/06 08:28	WG247182
Ethylbenzene	< .0005	mg/kg		04/20/06 08:28	WG247182
m&p-Xylene	< .001	mg/kg		04/20/06 08:28	WG247182
Methyl tert-butyl ether	< .001	mg/kg		04/20/06 08:28	WG247182
Naphthalene	< .005	mg/kg		04/20/06 08:28	WG247182
o-Xylene	< .0005	mg/kg		04/20/06 08:28	WG247182
Toluene	< .005	mg/kg		04/20/06 08:28	WG247182
GRO	< .1	mg/kg		04/20/06 08:28	WG247182

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Total Solids	%	81.7	81.8	0.174	20	L241694-04	WG247025
Total Solids	%	79.5	78.7	0.949	20	L241704-05	WG247026

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Total Solids	%	50	49.8	100.	85-115	WG247025
Total Solids	%	50	50.4	101.	85-115	WG247026
1,2,4-Trimethylbenzene	mg/kg	.05	0.0531	106.	80-120	WG247182
1,3,5-Trimethylbenzene	mg/kg	.05	0.0560	112.	80-120	WG247182
Benzene	mg/kg	.05	0.0534	107.	80-120	WG247182
Ethylbenzene	mg/kg	.05	0.0544	109.	80-120	WG247182
m&p-Xylene	mg/kg	.1	0.107	107.	80-120	WG247182
Methyl tert-butyl ether	mg/kg	.05	0.0546	109.	80-120	WG247182
Naphthalene	mg/kg	.05	0.0535	107.	80-120	WG247182
o-Xylene	mg/kg	.05	0.0532	106.	80-120	WG247182
Toluene	mg/kg	.05	0.0497	99.0	80-120	WG247182
GRO	mg/kg	2.2	0.526	24.0	67-135	WG247182

Analyte	Units	Laboratory Control Sample		Duplicate	RPD	Limit	%Rec	Batch
		LCSD Res	Ref Res					
1,2,4-Trimethylbenzene	mg/kg	0.0496	0.0531	6.83	20	99		WG247182
1,3,5-Trimethylbenzene	mg/kg	0.0527	0.0560	6.21	20	105		WG247182
Benzene	mg/kg	0.0509	0.0534	4.81	20	102		WG247182
Ethylbenzene	mg/kg	0.0516	0.0544	5.27	20	103		WG247182
m&p-Xylene	mg/kg	0.102	0.107	5.59	20	102		WG247182
Methyl tert-butyl ether	mg/kg	0.0531	0.0546	2.84	20	106		WG247182
Naphthalene	mg/kg	0.0485	0.0535	9.82	20	97		WG247182
o-Xylene	mg/kg	0.0511	0.0532	4.16	20	102		WG247182
Toluene	mg/kg	0.0476	0.0497	4.28	20	95		WG247182
GRO	mg/kg	0.495	0.526	6.07	20	23		WG247182

Analyte	Units	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res					
1,2,4-Trimethylbenzene	mg/kg	1.22	0.00	.05	97.0	80-120	L241388-07	WG247182
1,3,5-Trimethylbenzene	mg/kg	1.30	0.00	.05	104.	80-120	L241388-07	WG247182
Benzene	mg/kg	1.31	0.00	.05	104.	80-120	L241388-07	WG247182

Summary of Remarks For Samples Printed  
04/21/06 at 10:07:18

TSR Signing Reports: 341  
R3 - Rush: Two Day

Sample: L241703-01 Account: MUROILSWI Received: 04/19/06 09:00 Due Date: 04/21/06 00:00 RPT Date: 04/21/06 10:06  
Results due 4/21 am. jg-4/19  
Sample: L241703-02 Account: MUROILSWI Received: 04/19/06 09:00 Due Date: 04/21/06 00:00 RPT Date: 04/21/06 10:06  
Sample: L241703-03 Account: MUROILSWI Received: 04/19/06 09:00 Due Date: 04/21/06 00:00 RPT Date: 04/21/06 10:06  
Sample: L241703-04 Account: MUROILSWI Received: 04/19/06 09:00 Due Date: 04/21/06 00:00 RPT Date: 04/21/06 10:06  
Sample: L241703-05 Account: MUROILSWI Received: 04/19/06 09:00 Due Date: 04/21/06 00:00 RPT Date: 04/21/06 10:06  
Sample: L241703-06 Account: MUROILSWI Received: 04/19/06 09:00 Due Date: 04/21/06 00:00 RPT Date: 04/21/06 10:06



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REPORT OF ANALYSIS

David Beattie  
Murphy Oil Company  
2407 Stinson Avenue  
Superior, WI 54880

April 21, 2006

Date Received : April 19, 2006  
Description : Tk 57 Mixer Spill  
Sample ID : E. TANK RING 2.5-3FT  
Collected By : Beattie-Darby  
Collection Date : 04/18/06 10:40

ESC Sample # : L241703-06

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	79.6		%	2540G	04/20/06	1
PVOCGRO						
Benzene	0.046	0.029	mg/kg	8021	04/20/06	46
Toluene	0.57	0.29	mg/kg	8021	04/20/06	46
Ethylbenzene	0.11	0.029	mg/kg	8021	04/20/06	46
m&p-Xylene	0.35	0.058	mg/kg	8021	04/20/06	46
o-Xylene	0.21	0.029	mg/kg	8021	04/20/06	46
Methyl tert-butyl ether	BDL	0.058	mg/kg	8021	04/20/06	46
Naphthalene	BDL	0.29	mg/kg	8021	04/20/06	46
1,3,5-Trimethylbenzene	BDL	0.058	mg/kg	8021	04/20/06	46
1,2,4-Trimethylbenzene	0.088	0.058	mg/kg	8021	04/20/06	46
GRO	11.	5.8	mg/kg	8015	04/20/06	46
Surrogate Recovery (70-130)						
2,5-Dibromotoluene	110		% Rec.	8021	04/20/06	46

*John Hawkins*  
John Hawkins, ESC Representative

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - 81002, WI - 998093910, IL-200008

Note:

This report shall not be reproduced, except in full, without the written approval from ESC.

The reported analytical results relate only to the sample submitted

Reported: 04/21/06 10:06 Printed: 04/21/06 10:07



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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

April 21, 2006

David Beattie  
Murphy Oil Company  
2407 Stinson Avenue  
Superior, WI 54880

Date Received : April 19, 2006  
Description : Tk 57 Mixer Spill  
Sample ID : NE CORNER 1.5-2FT  
Collected By : Beattie-Darby  
Collection Date : 04/18/06 10:35

ESC Sample # : L241703-05

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	76.6		%	2540G	04/20/06	1
PVOCGRO						
Benzene	BDL	0.030	mg/kg	8021	04/20/06	46
Toluene	BDL	0.30	mg/kg	8021	04/20/06	46
Ethylbenzene	BDL	0.030	mg/kg	8021	04/20/06	46
m&p-Xylene	BDL	0.060	mg/kg	8021	04/20/06	46
o-Xylene	BDL	0.030	mg/kg	8021	04/20/06	46
Methyl tert-butyl ether	BDL	0.060	mg/kg	8021	04/20/06	46
Naphthalene	BDL	0.30	mg/kg	8021	04/20/06	46
1,3,5-Trimethylbenzene	BDL	0.060	mg/kg	8021	04/20/06	46
1,2,4-Trimethylbenzene	BDL	0.060	mg/kg	8021	04/20/06	46
GRO	6.0	6.0	mg/kg	8015	04/20/06	46
Surrogate Recovery (70-130)						
2,5-Dibromotoluene	110		% Rec.	8021	04/20/06	46

  
John Hawkins, ESC Representative

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - 81002, WI - 998093910, IL-200008

Note:

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REPORT OF ANALYSIS

David Beattie  
Murphy Oil Company  
2407 Stinson Avenue  
Superior, WI 54880

April 21, 2006


Date Received : April 19, 2006  
Description : Tk 57 Mixer Spill  
Sample ID : W. TANK RING 2.5-3FT  
Collected By : Beattie-Darby  
Collection Date : 04/18/06 10:25

ESC Sample # : L241703-04

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	88.3		%	2540G	04/20/06	1
PVOCGRO						
Benzene	BDL	0.026	mg/kg	8021	04/20/06	46
Toluene	BDL	0.26	mg/kg	8021	04/20/06	46
Ethylbenzene	BDL	0.026	mg/kg	8021	04/20/06	46
m&p-Xylene	BDL	0.052	mg/kg	8021	04/20/06	46
o-Xylene	BDL	0.026	mg/kg	8021	04/20/06	46
Methyl tert-butyl ether	BDL	0.052	mg/kg	8021	04/20/06	46
Naphthalene	BDL	0.26	mg/kg	8021	04/20/06	46
1,3,5-Trimethylbenzene	BDL	0.052	mg/kg	8021	04/20/06	46
1,2,4-Trimethylbenzene	BDL	0.052	mg/kg	8021	04/20/06	46
GRO	BDL	5.2	mg/kg	8015	04/20/06	46
Surrogate Recovery (70-130)						
2,5-Dibromotoluene	110		% Rec.	8021	04/20/06	46

  
John Hawkins, ESC Representative

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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REPORT OF ANALYSIS

David Beattie  
Murphy Oil Company  
2407 Stinson Avenue  
Superior, WI 54880

April 21, 2006

Date Received : April 19, 2006  
Description : Tk 57 Mixer Spill  
Sample ID : NW CORNER 1.5-2FT  
Collected By : Beattie-Darby  
Collection Date : 04/18/06 10:20

ESC Sample # : L241703-03

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	78.0		%	2540G	04/20/06	1
PVOCGRO						
Benzene	BDL	0.029	mg/kg	8021	04/20/06	45.5
Toluene	BDL	0.29	mg/kg	8021	04/20/06	45.5
Ethylbenzene	BDL	0.029	mg/kg	8021	04/20/06	45.5
m&p-Xylene	BDL	0.058	mg/kg	8021	04/20/06	45.5
o-Xylene	BDL	0.029	mg/kg	8021	04/20/06	45.5
Methyl tert-butyl ether	BDL	0.058	mg/kg	8021	04/20/06	45.5
Naphthalene	BDL	0.29	mg/kg	8021	04/20/06	45.5
1,3,5-Trimethylbenzene	BDL	0.058	mg/kg	8021	04/20/06	45.5
1,2,4-Trimethylbenzene	BDL	0.058	mg/kg	8021	04/20/06	45.5
GRO	BDL	5.8	mg/kg	8015	04/20/06	45.5
Surrogate Recovery (70-130)						
2,5-Dibromotoluene	98.		% Rec.	8021	04/20/06	45.5

  
John Hawkins, ESC Representative

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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REPORT OF ANALYSIS

David Beattie  
Murphy Oil Company  
2407 Stinson Avenue  
Superior, WI 54880

April 21, 2006

Date Received : April 19, 2006  
Description : Tk 57 Mixer Spill  
Sample ID : 15FT N.OF MIXER1.5-2  
Collected By : Beattie-Darby  
Collection Date : 04/18/06 10:10

ESC Sample # : L241703-02

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	73.5		%	2540G	04/20/06	1
PVOCGRO						
Benzene	0.044	0.034	mg/kg	8021	04/20/06	49.5
Toluene	BDL	0.34	mg/kg	8021	04/20/06	49.5
Ethylbenzene	0.097	0.034	mg/kg	8021	04/20/06	49.5
m&p-Xylene	0.37	0.067	mg/kg	8021	04/20/06	49.5
o-Xylene	0.18	0.034	mg/kg	8021	04/20/06	49.5
Methyl tert-butyl ether	BDL	0.067	mg/kg	8021	04/20/06	49.5
Naphthalene	BDL	0.34	mg/kg	8021	04/20/06	49.5
1,3,5-Trimethylbenzene	BDL	0.067	mg/kg	8021	04/20/06	49.5
1,2,4-Trimethylbenzene	0.16	0.067	mg/kg	8021	04/20/06	49.5
GRO	8.3	6.7	mg/kg	8015	04/20/06	49.5
Surrogate Recovery (70-130)						
2,5-Dibromotoluene	100		% Rec.	8021	04/20/06	49.5

  
John Hawkins, ESC Representative

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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REPORT OF ANALYSIS

David Beattie  
Murphy Oil Company  
2407 Stinson Avenue  
Superior, WI 54880

April 21, 2006

Date Received : April 19, 2006  
Description : Tk 57 Mixer Spill  
Sample ID : UNDER MIXER 3FT  
Collected By : Beattie-Darby  
Collection Date : 04/18/06 10:00

ESC Sample # : L241703-01

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	84.4		%	2540G	04/20/06	1
PVOCGRO						
Benzene	0.029	0.028	mg/kg	8021	04/20/06	48
Toluene	BDL	0.28	mg/kg	8021	04/20/06	48
Ethylbenzene	BDL	0.028	mg/kg	8021	04/20/06	48
m&p-Xylene	BDL	0.057	mg/kg	8021	04/20/06	48
o-Xylene	BDL	0.028	mg/kg	8021	04/20/06	48
Methyl tert-butyl ether	BDL	0.057	mg/kg	8021	04/20/06	48
Naphthalene	BDL	0.28	mg/kg	8021	04/20/06	48
1,3,5-Trimethylbenzene	BDL	0.057	mg/kg	8021	04/20/06	48
1,2,4-Trimethylbenzene	BDL	0.057	mg/kg	8021	04/20/06	48
GRO	BDL	5.7	mg/kg	8015	04/20/06	48
Surrogate Recovery (70-130)						
2,5-Dibromotoluene	100		% Rec.	8021	04/20/06	48

  
John Hawkins, ESC Representative

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Company Name/Address: <b>Murphy Oil Company</b>  2407 Stinson Avenue Superior, WI 54880			Alternate billing information:			Analysis/Container/Preservative			Chain of Custody Page ___ of ___				
Report to: <b>Dave Beattie</b>			Email to: <b>dave-beattie@murphyoilcorp.com</b>			GRO/BTEX / Methanol Dry wt.			Prepared by:  <b>ENVIRONMENTAL SCIENCE CORP.</b> 12065 Lebanon Road Mt. Juliet, TN 37122  Phone (615) 758-5858 Phone (800) 767-5859 FAX (615) 758-5859				
Project Description: <b>K57 Mixer Spill</b>			City/State Collected: <b>Sup, WI</b>						CoCode: <b>MUROILSW</b> (lab use only)		Template/Prelogin		
Phone: (715) 398-8455		Client Project #:		ESC Key:					Shipped Via:		Remarks/Contaminant		
FAX: (715) 398-8209		Site/Facility ID#:		P.O.#:					Sample # (lab only)				
Collected by: <b>Dave Beattie</b> <b>Mark Darby</b>			Collected by (signature): 						Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day ..... 200% <input type="checkbox"/> Next Day ..... 100% <input checked="" type="checkbox"/> Two Day ..... 50%			Date Results Needed: <b>4/21 a.m. if poss.</b>	
Packed on Ice: <b>N</b> <input checked="" type="checkbox"/> <b>Y</b>			Email? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes						FAX? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes				
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs			Remarks/Contaminant	Sample # (lab only)			
① Under Mixer	Grab	SS	~3'	4/18	1000	2	X	X	Gasoline ?	1241702-01			
② 15' North of Mixer	Grab	SS	1.5-2'	4/18	1010	2				22			
③ NW Corner (15,15)	Grab	SS	1.5-2'	"	1020	2				23			
④ West Tank Ring Wall	Grab	SS	2.5-3'	"	1025	2				24			
⑤ NE Corner (15,15)	Grab	SS	1.5-2'	"	1035	2				25			
⑥ East Tank Ring Wall	Grab	SS	2.5-3'	"	1040	2				26			

\*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other \_\_\_\_\_

Remarks: \_\_\_\_\_ pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature)	Date: 4/18/06	Time: 1600	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 27	Bottles Received: 12
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4-19-06	Time: 9:00
				pH Checked:	NCF: