State of Wisconsin - Department of Natural Resources
Substance Release Notification Report
Report created on 11/06/2007

SPILL ID# BRRTS# 04-16-550121

| Incident Date & Time: 06/06/2007 2217 | Reported Date & Time: 11/07/2007 0825 | BRRTS No: | Spill ID: |
|---|---|---|---|
| DATCP Reported? No<br>DATCP Transferred? No | NFA Letter Sent? No | ERP Transferred? No | Incident Closed? Yes : 11/06/2007 |

## Location

| Region: NO | County: Douglas | Municipality: SUPERIOR, CITY OF |
|---|---|---|

| Facility/Property Name and Street Address: MURPHY OIL USA, INC 2407 STINTON AVE | Description: TANK 70 BASIN |
|---|---|

Facility Type: Bulk Oil Petroleum Facility/Pipeline/Transfer Station

| Lat/Long: | PLSS: | WTM: |
|---|---|---|

Weather Conditions:

## Responsible Parties

| Name/Address (1): MURPHY OIL USA, INC 2407 STINTON AVE SUPERIOR, WI 54880- (715) 398-3533 x Primary | Contact: DAVID BEATTIE ENVIRONMENTAL ENGINEER (715) 398-8455 x primary | Other Contact: | Spill Packet: |
|---|---|---|---|

## Cause

FAULTY TANK GUAGE CAUSED OVERFILL

Cause Type: Overfill (storage tank, verhicle or equipment)

## Substances

| Name | Other / Comments | Amt Released | Amt Recovered | Type | Color | Odor |
|---|---|---|---|---|---|---|
| Gasoline | | 7000.0 Gal | 7000.0 Gal | LIQUID | | |

## Environmental Impacts / Damages

| Environmental Impacts: OTHER IMPACT: SOIL INSIDE CONTAINMENT | Resource Damages: No | Injuries: No | Evacuation: No |
|---|---|---|---|

## Cleanup Actions

| Method | Description |
|---|---|
| Containment | SPILL STAYED WITHIN CONTINMENT BERM |
| Flushed | WATER TO TREATMENT PLANT |
| Flushed | |

## Cleanup Action Comments

## Contractors Hired

| Name | Description |
|---|---|

## Waste Destinations

| Location | Description |
|---|---|

## Agencies Notified / On Scene

State of Wisconsin - Department of Natural Resources
Substance Release Notification Report
Report created on 11/06/2007

SPILL ID#

BRRTS#

| Agency | Notified | On Scene |
|---|---|---|
| DNR | X | |

**Additional Comments**

**Enforcement Actions**

Enforcement action? No

| Case Activity Report Numbers: | (1) |
|---|---|

**Person Reporting**

| Name | Representing / Address | Primary Phone | Secondary Phone |
|---|---|---|---|
| DAVID BEATTIE | MURPHY OIL USA, INC | (715) 398-8455 x | |

**Contractors Hired**

| Name / Address | Zone Contractor Hired by DNR? |
|---|---|
| | No |

**Contacts**

| Role | Name / Address | Office Phone | Date | Time |
|---|---|---|---|---|
| Prepared By: | JOHN SAGER | (715) 365-8959 x | 11/07/2007 | |
| Person Notified: | JOHN SAGER | | 06/07/2007 | |
| Investigated By: | JOHN SAGER | (715) 365-8959 x | 06/07/2007 | |
| Incident Commander: | | | | |
| Spill Coordinator: | NO - SAGER, JOHN [P] 715-365-8959 | | 11/06/2007 | |

**Electronic Attachments (list)**

| Name | Type |
|---|---|

**Sager, John E - DNR**

---

**From:** Dave_Beattie@murphyoilcorp.com
**Sent:** Thursday, November 01, 2007 2:46 PM
**To:** Sager, John E - DNR
**Subject:** Fw: Lab Report - L317406
**Attachments:** L317406.pdf

This is water that was transferred out of the Tk 70 basin. The water was in the basin for 1-2 weeks after we received a good size rainfall, and then transterred to Tk 53 for a hydrotest(putting tank back in service) and then treated on site. Let me know if you have any questions. As you can see, it was extemely clean.

Thanks. I look forward to hearing back from you soon.

Thanks.
Dave

David Beattie
Environmental Engineer
Murphy Oil USA - Superior Refinery
715-398-8455
715-398-8209 fax

*(See attached file: L317406.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.

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Tax I.D. 62-0814289

Est. 1970

David Beattie
Murphy Oil Company
2407 Stinson Avenue

Superior, WI 54880

# Report Summary

Wednesday October 31, 2007

Report Number: L317406
Samples Received: 10/31/07
Client Project:

Description: TC53 Hydrotest

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John Hawkins, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, 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
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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REPORT OF ANALYSIS

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

October 31, 2007

Date Received : October 31, 2007
Description : TC53 Hydrotest

Sample ID : TC53 HYDROTEST

Collected By : D. Beattie
Collection Date : 10/30/07 15:00

ESC Sample # : L317406-01

Site ID :

Project # :

| Parameter | Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | |
| Acetone | BDL | 0.050 | mg/l | 8260B | 10/31/07 | 1 |
| Acrolein | BDL | 0.050 | mg/l | 8260B | 10/31/07 | 1 |
| Acrylonitrile | BDL | 0.010 | mg/l | 8260B | 10/31/07 | 1 |
| Benzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Bromobenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Bromodichloromethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Bromoform | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Bromomethane | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| n-Butylbenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| sec-Butylbenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| tert-Butylbenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Carbon tetrachloride | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Chlorobenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Chlorodibromomethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Chloroethane | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| 2-Chloroethyl vinyl ether | BDL | 0.050 | mg/l | 8260B | 10/31/07 | 1 |
| Chloroform | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| Chloromethane | BDL | 0.0025 | mg/l | 8260B | 10/31/07 | 1 |
| 2-Chlorotoluene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 4-Chlorotoluene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2-Dibromo-3-Chloropropane | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2-Dibromoethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Dibromomethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2-Dichlorobenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,3-Dichlorobenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,4-Dichlorobenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Dichlorodifluoromethane | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1-Dichloroethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2-Dichloroethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1-Dichloroethene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| cis-1,2-Dichloroethene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| trans-1,2-Dichloroethene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2-Dichloropropane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1-Dichloropropene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,3-Dichloropropane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| cis-1,3-Dichloropropene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| trans-1,3-Dichloropropene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 2,2-Dichloropropane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Di-isopropyl ether | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Ethylbenzene | 0.0022 | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Hexachlorobutadiene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Isopropylbenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| p-Isopropyltoluene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

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

October 31, 2007

Date Received : October 31, 2007
Description : TC53 Hydrotest

Sample ID : TC53 HYDROTEST

Collected By : D. Beattie
Collection Date : 10/30/07 15:00

ESC Sample # : L317406-01

Site ID :

Project # :

| Parameter | Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | BDL | 0.010 | mg/l | 8260B | 10/31/07 | 1 |
| Methylene Chloride | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| 4-Methyl-2-pentanone (MIBK) | BDL | 0.010 | mg/l | 8260B | 10/31/07 | 1 |
| Methyl tert-butyl ether | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Naphthalene | 0.0095 | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| n-Propylbenzene | 0.0015 | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Styrene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1,1,2-Tetrachloroethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1,2,2-Tetrachloroethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoro | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Tetrachloroethene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Toluene | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2,3-Trichlorobenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2,4-Trichlorobenzene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1,1-Trichloroethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,1,2-Trichloroethane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Trichloroethene | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Trichlorofluoromethane | BDL | 0.0050 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2,3-Trichloropropane | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2,4-Trimethylbenzene | 0.016 | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,2,3-Trimethylbenzene | 0.0058 | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| 1,3,5-Trimethylbenzene | 0.0044 | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Vinyl chloride | BDL | 0.0010 | mg/l | 8260B | 10/31/07 | 1 |
| Xylenes, Total | 0.022 | 0.0030 | mg/l | 8260B | 10/31/07 | 1 |
| Surrogate Recovery | | | | | | |
| Toluene-d8 | 102. | | % Rec. | 8260B | 10/31/07 | 1 |
| Dibromofluoromethane | 96.0 | | % Rec. | 8260B | 10/31/07 | 1 |
| 4-Bromofluorobenzene | 95.7 | | % Rec. | 8260B | 10/31/07 | 1 |

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 10/31/07 15:07 Printed: 10/31/07 15:07

Attachment A
List of Analytes with QC Qualifiers

| Sample # | Analyte | Qualifier |
|---|---|---|
| L317406-01 | Hexachlorobutadiene | J4 |
| | Trichlorofluoromethane | J4 |
| | 1,2,3-Trimethylbenzene | J4 |
| | Vinyl chloride | J4 |

Attachment B
Explanation of QC Qualifier Codes

| Qualifier | Meaning |
|---|---|
| J4 | The associated batch QC was outside the established quality control range for accuracy. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

| | Control Limits | | | | (AQ) | (SS) |
|---|---|---|---|---|---|---|
| 2-Fluorophenol | 31-119 | Nitrobenzene-d5 | 43-118 | Dibromfluoromethane | 68-128 | 64-125 |
| Phenol-d5 | 12-134 | 2-Fluorobiphenyl | 45-128 | Toluene-d8 | 76-115 | 69-118 |
| 2,4,6-Tribromophenol | 51-141 | Terphenyl-d14 | 43-137 | 4-Bromofluorobenzene | 79-127 | 61-134 |

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
10/31/07 at 15:07:58

TSR Signing Reports: 341
R1 - Rush: Sameday

Sample: L317406-01 Account: MUROILSWI Received: 10/31/07 09:00 Due Date: 11/01/07 00:00 RPT Date: 10/31/07 15:07

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Murphy Oil Company
David Beattie
2407 Stinson Avenue

Superior, WI 54880

Quality Assurance Report
Level II

L317406

October 31, 2007

Laboratory Blank

| Analyte | Result | Units | Date Analyzed | Batch |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,1,1-Trichloroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,1,2,2-Tetrachloroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,1,2-Trichloroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,1-Dichloroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,1-Dichloroethene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,1-Dichloropropene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2,3-Trichlorobenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2,3-Trichloropropane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2,3-Trimethylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2,4-Trichlorobenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2,4-Trimethylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2-Dibromo-3-Chloropropane | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2-Dibromoethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2-Dichlorobenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2-Dichloroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,2-Dichloropropane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,3,5-Trimethylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,3-Dichlorobenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,3-Dichloropropane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 1,4-Dichlorobenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 2,2-Dichloropropane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 2-Butanone (MEK) | < .01 | mg/l | 10/31/07 09:27 | WG328148 |
| 2-Chloroethyl vinyl ether | < .05 | mg/l | 10/31/07 09:27 | WG328148 |
| 2-Chlorotoluene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 4-Chlorotoluene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| 4-Methyl-2-pentanone (MIBK) | < .01 | mg/l | 10/31/07 09:27 | WG328148 |
| Acetone | < .05 | mg/l | 10/31/07 09:27 | WG328148 |
| Acrolein | < .05 | mg/l | 10/31/07 09:27 | WG328148 |
| Acrylonitrile | < .01 | mg/l | 10/31/07 09:27 | WG328148 |
| Benzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Bromobenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Bromodichloromethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Bromoform | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Bromomethane | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
| Carbon tetrachloride | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Chlorobenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Chlorodibromomethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Chloroethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Chloroform | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
| Chloromethane | < .0025 | mg/l | 10/31/07 09:27 | WG328148 |
| cis-1,2-Dichloroethene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| cis-1,3-Dichloropropene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Di-isopropyl ether | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Dibromomethane | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Dichlorodifluoromethane | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
| Ethylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Hexachlorobutadiene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Isopropylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Methyl tert-butyl ether | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Methylene Chloride | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
| n-Butylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| n-Propylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Naphthalene | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
| p-Isopropyltoluene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| sec-Butylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Styrene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| tert-Butylbenzene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Tetrachloroethene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |

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Murphy Oil Company
David Beattie
2407 Stinson Avenue

Superior, WI 54880

Quality Assurance Report
Level II

L317406

October 31, 2007

| Toluene | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
|---|---|---|---|---|

Laboratory Blank

| Analyte | Result | Units | Date Analyzed | Batch |
|---|---|---|---|---|
| trans-1,2-Dichloroethene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| trans-1,3-Dichloropropene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Trichloroethene | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Trichlorofluoromethane | < .005 | mg/l | 10/31/07 09:27 | WG328148 |
| Vinyl chloride | < .001 | mg/l | 10/31/07 09:27 | WG328148 |
| Xylenes, Total | < .003 | mg/l | 10/31/07 09:27 | WG328148 |

Laboratory Control Sample

| Analyte | Units | Known Val | Result | % Rec | Limit | Batch |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | mg/l | .05 | 0.0541 | 108. | 61-134 | WG328148 |
| 1,1,1-Trichloroethane | mg/l | .05 | 0.0534 | 107. | 62-133 | WG328148 |
| 1,1,2,2-Tetrachloroethane | mg/l | .05 | 0.0475 | 95.0 | 66-124 | WG328148 |
| 1,1,2-Trichloroethane | mg/l | .05 | 0.0508 | 102. | 62-124 | WG328148 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | mg/l | .05 | 0.0601 | 120. | 66-130 | WG328148 |
| 1,1-Dichloroethane | mg/l | .05 | 0.0526 | 105. | 59-135 | WG328148 |
| 1,1-Dichloroethene | mg/l | .05 | 0.0525 | 105. | 68-136 | WG328148 |
| 1,1-Dichloropropene | mg/l | .05 | 0.0572 | 114. | 63-125 | WG328148 |
| 1,2,3-Trichlorobenzene | mg/l | .05 | 0.0506 | 101. | 57-152 | WG328148 |
| 1,2,3-Trichloropropane | mg/l | .05 | 0.0499 | 99.8 | 62-138 | WG328148 |
| 1,2,3-Trimethylbenzene | mg/l | .05 | 0.0556 | 111. | 61-107 | WG328148 |
| 1,2,4-Trichlorobenzene | mg/l | .05 | 0.0498 | 99.7 | 49-153 | WG328148 |
| 1,2,4-Trimethylbenzene | mg/l | .05 | 0.0539 | 108. | 61-128 | WG328148 |
| 1,2-Dibromo-3-Chloropropane | mg/l | .05 | 0.0508 | 102. | 50-139 | WG328148 |
| 1,2-Dibromoethane | mg/l | .05 | 0.0519 | 104. | 70-122 | WG328148 |
| 1,2-Dichlorobenzene | mg/l | .05 | 0.0538 | 108. | 54-135 | WG328148 |
| 1,2-Dichloroethane | mg/l | .05 | 0.0481 | 96.1 | 61-131 | WG328148 |
| 1,2-Dichloropropane | mg/l | .05 | 0.0510 | 102. | 64-126 | WG328148 |
| 1,3,5-Trimethylbenzene | mg/l | .05 | 0.0569 | 114. | 65-126 | WG328148 |
| 1,3-Dichlorobenzene | mg/l | .05 | 0.0527 | 105. | 45-143 | WG328148 |
| 1,3-Dichloropropane | mg/l | .05 | 0.0513 | 103. | 74-118 | WG328148 |
| 1,4-Dichlorobenzene | mg/l | .05 | 0.0517 | 103. | 48-138 | WG328148 |
| 2,2-Dichloropropane | mg/l | .05 | 0.0510 | 102. | 52-140 | WG328148 |
| 2-Butanone (MEK) | mg/l | .25 | 0.199 | 79.7 | 50-132 | WG328148 |
| 2-Chloroethyl vinyl ether | mg/l | .25 | 0.244 | 97.6 | 36-136 | WG328148 |
| 2-Chlorotoluene | mg/l | .05 | 0.0549 | 110. | 61-134 | WG328148 |
| 4-Chlorotoluene | mg/l | .05 | 0.0511 | 102. | 67-129 | WG328148 |
| 4-Methyl-2-pentanone (MIBK) | mg/l | .25 | 0.218 | 87.3 | 47-143 | WG328148 |
| Acetone | mg/l | .25 | 0.216 | 86.6 | 36-163 | WG328148 |
| Acrolein | mg/l | .25 | 0.211 | 84.5 | 27-122 | WG328148 |
| Acrylonitrile | mg/l | .25 | 0.206 | 82.6 | 44-130 | WG328148 |
| Benzene | mg/l | .05 | 0.0506 | 101. | 63-121 | WG328148 |
| Bromobenzene | mg/l | .05 | 0.0505 | 101. | 70-130 | WG328148 |
| Bromodichloromethane | mg/l | .05 | 0.0484 | 96.8 | 64-127 | WG328148 |
| Bromoform | mg/l | .05 | 0.0522 | 104. | 60-139 | WG328148 |
| Bromomethane | mg/l | .05 | 0.0598 | 120. | 30-125 | WG328148 |
| Carbon tetrachloride | mg/l | .05 | 0.0552 | 110. | 70-140 | WG328148 |
| Chlorobenzene | mg/l | .05 | 0.0551 | 110. | 70-126 | WG328148 |
| Chlorodibromomethane | mg/l | .05 | 0.0518 | 104. | 62-132 | WG328148 |
| Chloroethane | mg/l | .05 | 0.0630 | 126. | 43-146 | WG328148 |
| Chloroform | mg/l | .05 | 0.0491 | 98.2 | 65-121 | WG328148 |
| Chloromethane | mg/l | .05 | 0.0586 | 117. | 45-131 | WG328148 |
| cis-1,2-Dichloroethene | mg/l | .05 | 0.0491 | 98.2 | 68-123 | WG328148 |
| cis-1,3-Dichloropropene | mg/l | .05 | 0.0486 | 97.3 | 66-121 | WG328148 |
| Di-isopropyl ether | mg/l | .05 | 0.0441 | 88.3 | 58-127 | WG328148 |
| Dibromomethane | mg/l | .05 | 0.0496 | 99.1 | 69-119 | WG328148 |
| Dichlorodifluoromethane | mg/l | .05 | 0.0763 | 153. | 24-155 | WG328148 |
| Ethylbenzene | mg/l | .05 | 0.0585 | 117. | 70-121 | WG328148 |
| Hexachlorobutadiene | mg/l | .05 | 0.0616 | 123. | 60-119 | WG328148 |

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David Beattie
2407 Stinson Avenue

Superior, WI 54880

Quality Assurance Report
Level II

L317406

October 31, 2007

| Isopropylbenzene | mg/l | .05 | 0.0588 | 118. | 68-128 | WG328148 |
|---|---|---|---|---|---|---|

Laboratory Control Sample

| Analyte | Units | Known Val | Result | % Rec | Limit | Batch |
|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | mg/l | .05 | 0.0437 | 87.5 | 51-137 | WG328148 |
| Methylene Chloride | mg/l | .05 | 0.0483 | 96.7 | 53-131 | WG328148 |
| n-Butylbenzene | mg/l | .05 | 0.0595 | 119. | 59-134 | WG328148 |
| n-Propylbenzene | mg/l | .05 | 0.0582 | 116. | 68-123 | WG328148 |
| Naphthalene | mg/l | .05 | 0.0481 | 96.2 | 54-150 | WG328148 |
| p-Isopropyltoluene | mg/l | .05 | 0.0585 | 117. | 64-132 | WG328148 |
| sec-Butylbenzene | mg/l | .05 | 0.0591 | 118. | 67-124 | WG328148 |
| Styrene | mg/l | .05 | 0.0539 | 108. | 68-123 | WG328148 |
| tert-Butylbenzene | mg/l | .05 | 0.0571 | 114. | 65-128 | WG328148 |
| Tetrachloroethene | mg/l | .05 | 0.0640 | 128. | 64-134 | WG328148 |
| Toluene | mg/l | .05 | 0.0520 | 104. | 65-120 | WG328148 |
| trans-1,2-Dichloroethene | mg/l | .05 | 0.0518 | 104. | 59-138 | WG328148 |
| trans-1,3-Dichloropropene | mg/l | .05 | 0.0463 | 92.6 | 55-113 | WG328148 |
| Trichloroethene | mg/l | .05 | 0.0560 | 112. | 74-120 | WG328148 |
| Trichlorofluoromethane | mg/l | .05 | 0.0704 | 141. | 49-121 | WG328148 |
| Vinyl chloride | mg/l | .05 | 0.0707 | 141. | 46-133 | WG328148 |
| Xylenes, Total | mg/l | .15 | 0.171 | 114. | 68-124 | WG328148 |

Laboratory Control Sample Duplicate

| Analyte | Units | LCSD Res | Ref Res | RPD | Limit | %Rec | Batch |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | mg/l | 0.0502 | 0.0541 | 7.55 | 17 | 100 | WG328148 |
| 1,1,1-Trichloroethane | mg/l | 0.0493 | 0.0534 | 7.83 | 17 | 99 | WG328148 |
| 1,1,2,2-Tetrachloroethane | mg/l | 0.0456 | 0.0475 | 4.02 | 16 | 91 | WG328148 |
| 1,1,2-Trichloroethane | mg/l | 0.0482 | 0.0508 | 5.10 | 16 | 96 | WG328148 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | mg/l | 0.0521 | 0.0601 | 14.3 | 18 | 104 | WG328148 |
| 1,1-Dichloroethane | mg/l | 0.0491 | 0.0526 | 6.81 | 22 | 98 | WG328148 |
| 1,1-Dichloroethene | mg/l | 0.0479 | 0.0525 | 9.20 | 17 | 96 | WG328148 |
| 1,1-Dichloropropene | mg/l | 0.0519 | 0.0572 | 9.66 | 17 | 104 | WG328148 |
| 1,2,3-Trichlorobenzene | mg/l | 0.0483 | 0.0506 | 4.79 | 19 | 97 | WG328148 |
| 1,2,3-Trichloropropane | mg/l | 0.0486 | 0.0499 | 2.67 | 18 | 97 | WG328148 |
| 1,2,3-Trimethylbenzene | mg/l | 0.0542 | 0.0556 | 2.54 | 16 | 108 | WG328148 |
| 1,2,4-Trichlorobenzene | mg/l | 0.0469 | 0.0498 | 6.02 | 20 | 94 | WG328148 |
| 1,2,4-Trimethylbenzene | mg/l | 0.0489 | 0.0539 | 9.67 | 18 | 98 | WG328148 |
| 1,2-Dibromo-3-Chloropropane | mg/l | 0.0516 | 0.0508 | 1.55 | 19 | 103 | WG328148 |
| 1,2-Dibromoethane | mg/l | 0.0496 | 0.0519 | 4.56 | 16 | 99 | WG328148 |
| 1,2-Dichlorobenzene | mg/l | 0.0522 | 0.0538 | 3.04 | 16 | 104 | WG328148 |
| 1,2-Dichloroethane | mg/l | 0.0470 | 0.0481 | 2.32 | 15 | 94 | WG328148 |
| 1,2-Dichloropropane | mg/l | 0.0484 | 0.0510 | 5.26 | 18 | 97 | WG328148 |
| 1,3,5-Trimethylbenzene | mg/l | 0.0506 | 0.0569 | 11.8 | 17 | 101 | WG328148 |
| 1,3-Dichlorobenzene | mg/l | 0.0480 | 0.0527 | 9.28 | 17 | 96 | WG328148 |
| 1,3-Dichloropropane | mg/l | 0.0490 | 0.0513 | 4.67 | 15 | 98 | WG328148 |
| 1,4-Dichlorobenzene | mg/l | 0.0500 | 0.0517 | 3.29 | 17 | 100 | WG328148 |
| 2,2-Dichloropropane | mg/l | 0.0467 | 0.0510 | 8.81 | 21 | 93 | WG328148 |
| 2-Butanone (MEK) | mg/l | 0.200 | 0.199 | 0.472 | 21 | 80 | WG328148 |
| 2-Chloroethyl vinyl ether | mg/l | 0.239 | 0.244 | 2.18 | 28 | 96 | WG328148 |
| 2-Chlorotoluene | mg/l | 0.0493 | 0.0549 | 10.7 | 26 | 99 | WG328148 |
| 4-Chlorotoluene | mg/l | 0.0461 | 0.0511 | 10.3 | 17 | 92 | WG328148 |
| 4-Methyl-2-pentanone (MIBK) | mg/l | 0.217 | 0.218 | 0.589 | 21 | 87 | WG328148 |
| Acetone | mg/l | 0.214 | 0.216 | 1.07 | 20 | 86 | WG328148 |
| Acrolein | mg/l | 0.190 | 0.211 | 10.7 | 13 | 76 | WG328148 |
| Acrylonitrile | mg/l | 0.207 | 0.206 | 0.466 | 20 | 83 | WG328148 |
| Benzene | mg/l | 0.0474 | 0.0506 | 6.52 | 16 | 95 | WG328148 |
| Bromobenzene | mg/l | 0.0471 | 0.0505 | 6.94 | 16 | 94 | WG328148 |
| Bromodichloromethane | mg/l | 0.0458 | 0.0484 | 5.64 | 17 | 92 | WG328148 |
| Bromoform | mg/l | 0.0502 | 0.0522 | 3.90 | 15 | 100 | WG328148 |
| Bromomethane | mg/l | 0.0541 | 0.0598 | 10.0 | 21 | 108 | WG328148 |
| Carbon tetrachloride | mg/l | 0.0499 | 0.0552 | 10.1 | 17 | 100 | WG328148 |
| Chlorobenzene | mg/l | 0.0510 | 0.0551 | 7.76 | 16 | 102 | WG328148 |

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David Beattie
2407 Stinson Avenue

Superior, WI 54880

Quality Assurance Report
Level II

L317406

October 31, 2007

| Analyte | Units | LCSD Res | Ref Res | RPD | Limit | %Rec | Batch |
|---|---|---|---|---|---|---|---|
| Chlorodibromomethane | mg/l | 0.0491 | 0.0518 | 5.23 | 15 | 98 | WG328148 |

Laboratory Control Sample Duplicate

| Analyte | Units | LCSD Res | Ref Res | RPD | Limit | %Rec | Batch |
|---|---|---|---|---|---|---|---|
| Chloroethane | mg/l | 0.0574 | 0.0630 | 9.16 | 24 | 115 | WG328148 |
| Chloroform | mg/l | 0.0464 | 0.0491 | 5.63 | 15 | 93 | WG328148 |
| Chloromethane | mg/l | 0.0528 | 0.0586 | 10.5 | 22 | 106 | WG328148 |
| cis-1,2-Dichloroethene | mg/l | 0.0460 | 0.0491 | 6.51 | 15 | 92 | WG328148 |
| cis-1,3-Dichloropropene | mg/l | 0.0462 | 0.0486 | 5.06 | 18 | 92 | WG328148 |
| Di-isopropyl ether | mg/l | 0.0424 | 0.0441 | 3.96 | 18 | 85 | WG328148 |
| Dibromomethane | mg/l | 0.0482 | 0.0496 | 2.74 | 16 | 96 | WG328148 |
| Dichlorodifluoromethane | mg/l | 0.0656 | 0.0763 | 15.1 | 22 | 131 | WG328148 |
| Ethylbenzene | mg/l | 0.0531 | 0.0585 | 9.70 | 17 | 106 | WG328148 |
| Hexachlorobutadiene | mg/l | 0.0590 | 0.0616 | 4.34 | 18 | 118 | WG328148 |
| Isopropylbenzene | mg/l | 0.0528 | 0.0588 | 10.7 | 17 | 106 | WG328148 |
| Methyl tert-butyl ether | mg/l | 0.0428 | 0.0437 | 2.10 | 18 | 86 | WG328148 |
| Methylene Chloride | mg/l | 0.0466 | 0.0483 | 3.76 | 17 | 93 | WG328148 |
| n-Butylbenzene | mg/l | 0.0563 | 0.0595 | 5.51 | 19 | 113 | WG328148 |
| n-Propylbenzene | mg/l | 0.0519 | 0.0582 | 11.3 | 17 | 104 | WG328148 |
| Naphthalene | mg/l | 0.0462 | 0.0481 | 4.13 | 17 | 92 | WG328148 |
| p-Isopropyltoluene | mg/l | 0.0520 | 0.0585 | 11.9 | 18 | 104 | WG328148 |
| sec-Butylbenzene | mg/l | 0.0526 | 0.0591 | 11.7 | 18 | 105 | WG328148 |
| Styrene | mg/l | 0.0494 | 0.0539 | 8.65 | 17 | 99 | WG328148 |
| tert-Butylbenzene | mg/l | 0.0515 | 0.0571 | 10.3 | 17 | 103 | WG328148 |
| Tetrachloroethene | mg/l | 0.0580 | 0.0640 | 9.91 | 18 | 116 | WG328148 |
| Toluene | mg/l | 0.0481 | 0.0520 | 7.78 | 18 | 96 | WG328148 |
| trans-1,2-Dichloroethene | mg/l | 0.0481 | 0.0518 | 7.39 | 22 | 96 | WG328148 |
| trans-1,3-Dichloropropene | mg/l | 0.0447 | 0.0463 | 3.52 | 18 | 89 | WG328148 |
| Trichloroethene | mg/l | 0.0513 | 0.0560 | 8.70 | 16 | 103 | WG328148 |
| Trichlorofluoromethane | mg/l | 0.0606 | 0.0704 | 14.9 | 19 | 121 | WG328148 |
| Vinyl chloride | mg/l | 0.0622 | 0.0707 | 12.9 | 17 | 124 | WG328148 |
| Xylenes, Total | mg/l | 0.156 | 0.171 | 9.58 | 17 | 104 | WG328148 |

Batch number /Run number / Sample number cross reference

WG328148: R339942: L317406-01

* * 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

L317406

October 31, 2007

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.

**Sager, John E - DNR**

**From:** Dave_Beattie@murphyoilcorp.com
**Sent:** Thursday, November 01, 2007 10:53 AM
**To:** Sager, John E - DNR
**Subject:** Soil Comparison Results from our Tk 70 gasoline release 6/6/07
**Attachments:** Tk 70 Soil analysis results and comparison.pdf

Good Morning John,

Good news, it appears that our water flushing of our Tk 70 gasoline spill site has worked quite well. As a reminder, that tank basin is synthetically lined, with approximately 12 inches of clay on top of the liner. We had added water and used rain water to soak into the affected soil in hopes it would pull out any contamination in the dirt that was indicated by the initial soil analysis. We pulled water out of this tank basin 3-4 times and treated the water on site through our WWTP. Attached are the results and there is a really nice comparison sheet and site map on the first couple of pages that gets all the analysis on one page.

If you get a chance to look at this sometime soon, we would apprciate it. Hopefully we can get closure on this site as soon as you look at it. We have a lot of water backed up in the other tank basins(that will flow through the Tk 70 basin) that we would like to get off-site before it freezes and we have a bunch of skating rinks. Your idea of putting hose/pipe from the one basin to the other didn't work as well as we would have liked, had some problems with improper fittings. We ended up renting a pump and moving it around from basin to basin for a week or so.

Please give me a call after you have had a chance to look at it.

Thanks.

Dave

*(See attached file: Tk 70 Soil analysis results and comparison.pdf)*

David Beattie
Environmental Engineer
Murphy Oil USA - Superior Refinery
715-398-8455
715-398-8209 fax

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October 31st, 2007

TPT #99E-0935

Mr. Dave Beattie
Murphy Oil, U.S.A
2407 Stinson Avenue
Superior, WI 54880

Re: Soil Sampling Locations and Analytical Results, Tank 70 Spill
Murphy Oil, U.S.A
Superior Refinery
2407 Stinson Avenue
Superior, WI 54880

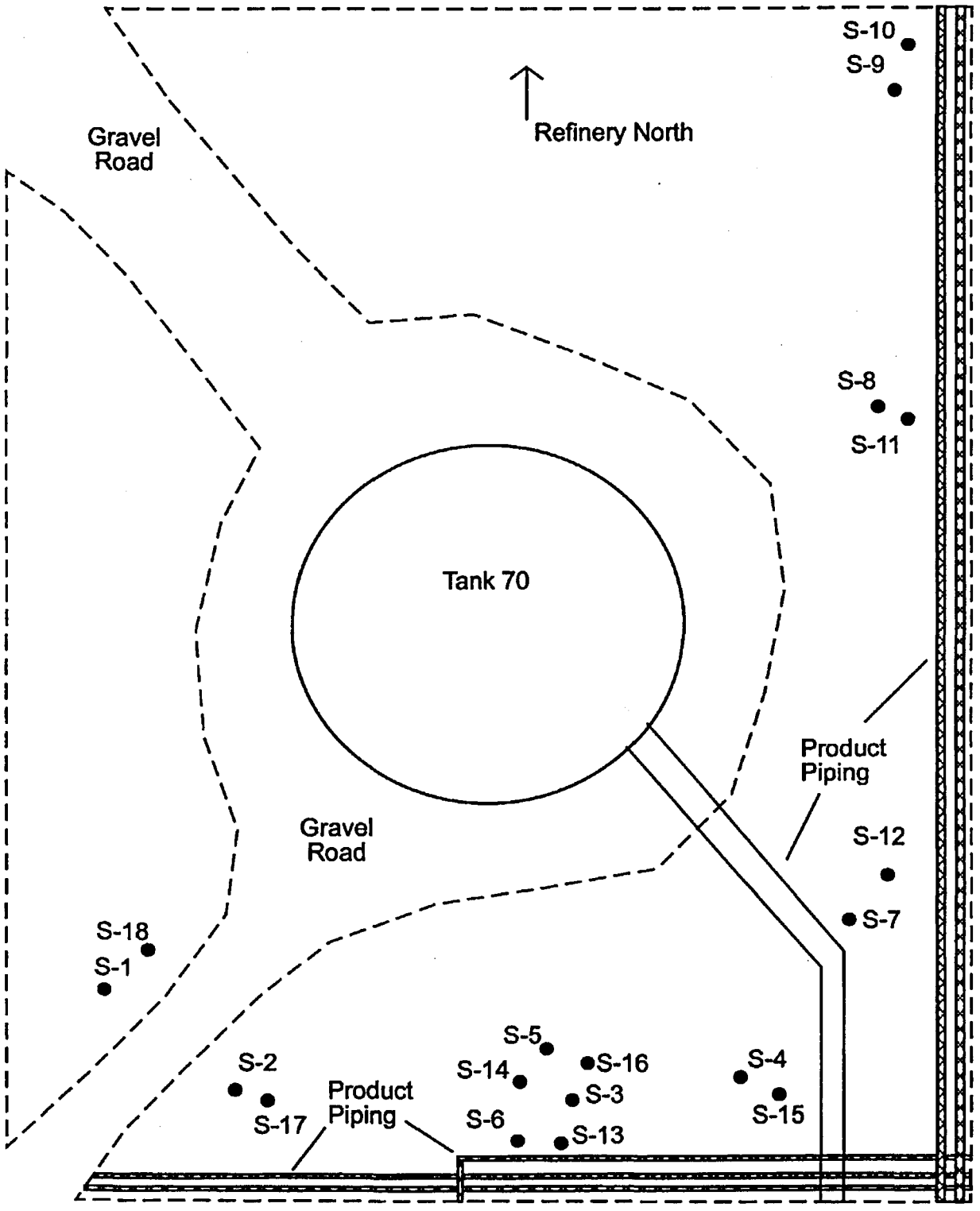
Dear Mr. Beattie,

Enclosed is a copy of the laboratory analytical results of the soil samples collected from the Tank 70 basin on June 25th and October 15th, 2007. All samples were collected at approximately 8-10 inches below the surface. Also included is a table showing the analytical results from each event and a site map with sampling locations. If you have any questions, please contact me at 715-392-7114.

Sincerely,
**Twin Ports Testing, Inc.**

Todd Flak

Todd Flak, Project Manager




Drawing Not to Scale

Twin Ports Testing

Tank 70 Soil Sampling Locations
Murphy Oil, Superior, WI

| | |
|---|---|
| DRAWN BY | TF |
| CHECKED BY | TF |
| APPR BY | TF |
| DATE | 06/27/07 |
| TPT NO. | 99e-0935 |
| FIGURE | 1 |

Soil Analytical Results
Tank 70
Murphy Oil, USA

| Sample | Collection Date | GRO | Benzene | Toluene | Ethylbenzene | Xylenes | Naphthalene |
|---|---|---|---|---|---|---|---|
| S-1 | 6/25/2007 | 10 | 0.49 | 0.14 | 0.081 | 0.78 | 0.13 |
| S-18 | 10/15/2007 | <6.6 | <0.033 | <0.33 | <0.033 | <0.099 | <0.33 |
| S-2 | 6/25/2007 | 9.6 | 0.63 | 0.13 | 0.27 | 0.72 | 0.24 |
| S-17 | 10/15/2007 | <7.3 | <0.036 | <0.36 | 0.037 | 0.246 | <0.36 |
| S-3 | 6/25/2007 | 2.3 | 0.13 | <0.083 | 0.039 | 0.112 | <0.083 |
| S-16 | 10/15/2007 | 8.7 | 0.083 | <0.35 | 0.069 | 0.61 | <0.35 |
| S-4 | 6/25/2007 | 18 | 0.6 | 0.66 | 0.49 | 2.5 | 0.57 |
| S-15 | 10/15/2007 | <6.7 | 0.13 | <0.34 | <0.034 | 0.177 | <0.34 |
| S-5 | 6/25/2007 | 260 | 8.3 | 34 | 8.3 | 42 | 2.9 |
| S-14 | 10/15/2007 | 180 | 0.61 | 3.7 | 2.6 | 32 | 1.8 |
| S-6 | 6/25/2007 | 170 | 6.9 | 4.6 | 3.4 | 17.1 | 3.5 |
| S-13 | 10/15/2007 | <7.5 | 0.048 | <0.37 | 0.056 | 0.28 | 0.43 |
| S-7 | 6/25/2007 | 1700 | 52 | 210 | 48 | 251 | 17 |
| S-12 | 10/15/2007 | 170 | 0.21 | 0.51 | 0.66 | 1.64 | 4.6 |
| S-8 | 6/25/2007 | 360 | 12 | 48 | 9.1 | 63 | 4.6 |
| S-11 | 10/15/2007 | <6.5 | 0.22 | <0.33 | <0.033 | 0.3 | <0.33 |
| S-9 | 6/25/2007 | 11 | 0.48 | 0.7 | 0.29 | 2.31 | 0.41 |
| S-10 | 10/15/2007 | <6.8 | 0.042 | <0.34 | <0.34 | <0.102 | <0.34 |
| NR 720 Generic RCLs | | 250 | 0.0055 | 1.5 | 2.9 | 4.1 | NS |

Notes:
Paired samples collected from the same area
All results reported in ppm
NS- indicates no standard

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RECD JUL 16 2007

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street

Superior, WI 54880

# Report Summary

Tuesday July 03, 2007

Report Number: L299471
Samples Received: 06/26/07
Client Project: 99E-0935

Description: Murphy Oil Tank #70

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: John Hawkins, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, 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
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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9 Samples Reported: 07/03/07 12:15 Printed: 07/03/07 12:31

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

ESC Sample # : L299471-01

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-1 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 10:00

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 69.0 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.49 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| Toluene | 0.14 | 0.074 | 0.33 | mg/kg | J | 8021 | 06/29/07 | 45 |
| Ethylbenzene | 0.081 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| m&p-Xylene | 0.48 | 0.015 | 0.065 | mg/kg | | 8021 | 06/29/07 | 45 |
| o-Xylene | 0.30 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| methyl tert-butyl ether | 0.28 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| Naphthalene | 0.13 | 0.074 | 0.33 | mg/kg | J | 8021 | 06/29/07 | 45 |
| 1,3,5-Trimethylbenzene | 0.097 | 0.015 | 0.065 | mg/kg | | 8021 | 06/29/07 | 45 |
| 1,2,4-Trimethylbenzene | 0.22 | 0.015 | 0.065 | mg/kg | | 8021 | 06/29/07 | 45 |
| GRO | 10. | 1.5 | 6.5 | mg/kg | | 8015 | 06/29/07 | 45 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/29/07 | 45 |

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

ESC Sample # : L299471-02

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Site ID : SUPERIOR, WI

Sample ID : S-2 8-10 IN

Project # : 99E-0935

Collected By : Todd Flak
Collection Date : 06/25/07 10:30

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 75.0 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.63 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| Toluene | 0.13 | 0.068 | 0.28 | mg/kg | J | 8021 | 06/29/07 | 41.5 |
| Ethylbenzene | 0.27 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| m&p-Xylene | 0.56 | 0.014 | 0.055 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| o-Xylene | 0.16 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| methyl tert-butyl ether | 0.057 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| Naphthalene | 0.24 | 0.068 | 0.28 | mg/kg | J | 8021 | 06/29/07 | 41.5 |
| 1,3,5-Trimethylbenzene | 0.20 | 0.014 | 0.055 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| 1,2,4-Trimethylbenzene | 0.49 | 0.014 | 0.055 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| GRO | 9.6 | 1.4 | 5.5 | mg/kg | | 8015 | 06/29/07 | 41.5 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/29/07 | 41.5 |

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
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Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-3 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 10:45

ESC Sample # : L299471-03

Site ID : SUPERIOR, WI

Project # : 99E-0935

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 74.6 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.13 | 0.0083 | 0.034 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| Toluene | U | 0.083 | 0.34 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| Ethylbenzene | 0.039 | 0.0083 | 0.034 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| m&p-Xylene | 0.083 | 0.017 | 0.068 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| o-Xylene | 0.029 | 0.0083 | 0.034 | mg/kg | J | 8021 | 06/29/07 | 50.5 |
| methyl tert-butyl ether | U | 0.0083 | 0.034 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| Naphthalene | U | 0.083 | 0.34 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| 1,3,5-Trimethylbenzene | U | 0.017 | 0.068 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| 1,2,4-Trimethylbenzene | 0.062 | 0.017 | 0.068 | mg/kg | J | 8021 | 06/29/07 | 50.5 |
| GRO | 2.3 | 1.7 | 6.8 | mg/kg | J | 8015 | 06/29/07 | 50.5 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/29/07 | 50.5 |

Results listed are dry weight basis.
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

ESC Sample # : L299471-04

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Site ID : SUPERIOR, WI

Sample ID : S-4 8-10 IN

Project # : 99E-0935

Collected By : Todd Flak
Collection Date : 06/25/07 11:00

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 71.4 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.60 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| Toluene | 0.66 | 0.081 | 0.34 | mg/kg | | 8021 | 06/30/07 | 49 |
| Ethylbenzene | 0.49 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| m&p-Xylene | 1.8 | 0.016 | 0.069 | mg/kg | | 8021 | 06/30/07 | 49 |
| o-Xylene | 0.70 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| methyl tert-butyl ether | 0.12 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| Naphthalene | 0.57 | 0.081 | 0.34 | mg/kg | | 8021 | 06/30/07 | 49 |
| 1,3,5-Trimethylbenzene | 0.56 | 0.016 | 0.069 | mg/kg | | 8021 | 06/30/07 | 49 |
| 1,2,4-Trimethylbenzene | 1.8 | 0.016 | 0.069 | mg/kg | | 8021 | 06/30/07 | 49 |
| GRO | 18. | 1.6 | 6.9 | mg/kg | | 8015 | 06/30/07 | 49 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/30/07 | 49 |

Results listed are dry weight basis.
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1301 North 3rd Street
Superior, WI 54880

July 03,2007

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-5 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 12:00

ESC Sample # : L299471-05

Site ID : SUPERIOR, WI

Project # : 99E-0935

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 73.2 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 8.3 | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| Toluene | 34. | 0.12 | 0.51 | mg/kg | E | 8021 | 06/30/07 | 75 |
| Ethylbenzene | 8.3 | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| m&p-Xylene | 30. | 0.025 | 0.10 | mg/kg | | 8021 | 06/30/07 | 75 |
| o-Xylene | 12. | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| methyl tert-butyl ether | 1.2 | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| Naphthalene | 2.9 | 0.12 | 0.51 | mg/kg | | 8021 | 06/30/07 | 75 |
| 1,3,5-Trimethylbenzene | 4.2 | 0.025 | 0.10 | mg/kg | | 8021 | 06/30/07 | 75 |
| 1,2,4-Trimethylbenzene | 12. | 0.025 | 0.10 | mg/kg | | 8021 | 06/30/07 | 75 |
| GRO | 260 | 2.5 | 10. | mg/kg | E | 8015 | 06/30/07 | 75 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 107. | | | % Rec. | | 8021 | 06/30/07 | 75 |

Results listed are dry weight basis.
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-6 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 12:15

ESC Sample # : L299471-06

Site ID : SUPERIOR, WI

Project # : 99E-0935

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 65.5 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 6.9 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| Toluene | 4.6 | 0.082 | 0.38 | mg/kg | | 8021 | 06/30/07 | 50 |
| Ethylbenzene | 3.4 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| m&p-Xylene | 13. | 0.016 | 0.076 | mg/kg | | 8021 | 06/30/07 | 50 |
| o-Xylene | 4.1 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| methyl tert-butyl ether | 1.3 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| Naphthalene | 3.5 | 0.082 | 0.38 | mg/kg | | 8021 | 06/30/07 | 50 |
| 1,3,5-Trimethylbenzene | 3.5 | 0.016 | 0.076 | mg/kg | | 8021 | 06/30/07 | 50 |
| 1,2,4-Trimethylbenzene | 12. | 0.016 | 0.076 | mg/kg | | 8021 | 06/30/07 | 50 |
| GRO | 170 | 1.6 | 7.6 | mg/kg | | 8015 | 06/30/07 | 50 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | | % Rec. | | 8021 | 06/30/07 | 50 |

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
RDL = Reported Detection Limit = LOQ = PQL = EQL = MQL(TRRP)
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

ESC Sample # : L299471-07

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-7 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 12:20

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 70.4 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 52. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| Toluene | 210 | 1.5 | 6.5 | mg/kg | | 8021 | 06/30/07 | 920 |
| Ethylbenzene | 48. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| m&p-Xylene | 180 | 0.30 | 1.3 | mg/kg | | 8021 | 06/30/07 | 920 |
| o-Xylene | 71. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| methyl tert-butyl ether | 16. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| Naphthalene | 17. | 1.5 | 6.5 | mg/kg | | 8021 | 06/30/07 | 920 |
| 1,3,5-Trimethylbenzene | 26. | 0.30 | 1.3 | mg/kg | | 8021 | 06/30/07 | 920 |
| 1,2,4-Trimethylbenzene | 80. | 0.30 | 1.3 | mg/kg | | 8021 | 06/30/07 | 920 |
| GRO | 1700 | 30. | 130 | mg/kg | | 8015 | 06/30/07 | 920 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/30/07 | 920 |

Results listed are dry weight basis.
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

ESC Sample # : L299471-08

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-8 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 12:30

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 79.9 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 12. | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| Toluene | 48. | 0.72 | 2.7 | mg/kg | | 8021 | 06/30/07 | 435 |
| Ethylbenzene | 9.1 | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| m&p-Xylene | 45. | 0.14 | 0.54 | mg/kg | | 8021 | 06/30/07 | 435 |
| o-Xylene | 18. | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| methyl tert-butyl ether | 2.2 | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| Naphthalene | 4.6 | 0.72 | 2.7 | mg/kg | | 8021 | 06/30/07 | 435 |
| 1,3,5-Trimethylbenzene | 6.4 | 0.14 | 0.54 | mg/kg | | 8021 | 06/30/07 | 435 |
| 1,2,4-Trimethylbenzene | 20. | 0.14 | 0.54 | mg/kg | | 8021 | 06/30/07 | 435 |
| GRO | 360 | 14. | 54. | mg/kg | | 8015 | 06/30/07 | 435 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 104. | | | % Rec. | | 8021 | 06/30/07 | 435 |

Results listed are dry weight basis.
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 03,2007

ESC Sample # : L299471-09

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Site ID : SUPERIOR, WI

Sample ID : S-9 8-10 IN

Project # : 99E-0935

Collected By : Todd Flak
Collection Date : 06/25/07 12:40

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 68.7 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.48 | 0.0086 | 0.038 | mg/kg | | 8021 | 06/30/07 | 52 |
| Toluene | 0.70 | 0.086 | 0.38 | mg/kg | | 8021 | 06/30/07 | 52 |
| Ethylbenzene | 0.29 | 0.0086 | 0.038 | mg/kg | | 8021 | 06/30/07 | 52 |
| m&p-Xylene | 1.7 | 0.017 | 0.076 | mg/kg | | 8021 | 06/30/07 | 52 |
| o-Xylene | 0.61 | 0.0086 | 0.038 | mg/kg | | 8021 | 06/30/07 | 52 |
| methyl tert-butyl ether | 0.045 | 0.0086 | 0.038 | mg/kg | J6 | 8021 | 06/30/07 | 52 |
| Naphthalene | 0.41 | 0.086 | 0.38 | mg/kg | J6 | 8021 | 06/30/07 | 52 |
| 1,3,5-Trimethylbenzene | 0.26 | 0.017 | 0.076 | mg/kg | | 8021 | 06/30/07 | 52 |
| 1,2,4-Trimethylbenzene | 0.86 | 0.017 | 0.076 | mg/kg | | 8021 | 06/30/07 | 52 |
| GRO | 11. | 1.7 | 7.6 | mg/kg | | 8015 | 06/30/07 | 52 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | | % Rec. | | 8021 | 06/30/07 | 52 |

Results listed are dry weight basis.
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Attachment A
List of Analytes with QC Qualifiers

| Sample # | Analyte | Qualifier |
|---|---|---|
| L299471-01 | Toluene | J |
| | Naphthalene | J |
| L299471-02 | Toluene | J |
| | Naphthalene | J |
| L299471-03 | o-Xylene | J |
| | 1,2,4-Trimethylbenzene | J |
| | GRO | J |
| L299471-05 | Toluene | E |
| | GRO | E |
| L299471-09 | methyl tert-butyl ether | J6 |
| | Naphthalene | J6 |

Attachment B
Explanation of QC Qualifier Codes

| Qualifier | Meaning |
|---|---|
| E | GTL (EPA) - Greater than upper calibration limit: Actual value is known to be greater than the upper calibration range. |
| J | (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

| | Control Limits | | | (AQ) | (SS) |
|---|---|---|---|---|---|
| 2-Fluorophenol | 31-119 | Nitrobenzene-d5 | 43-118 | Dibromfluoromethane 68-128 | 64-125 |
| Phenol-d5 | 12-134 | 2-Fluorobiphenyl | 45-128 | Toluene-d8 76-115 | 69-118 |
| 2,4,6-Tribromophenol | 51-141 | Terphenyl-d14 | 43-137 | 4-Bromofluorobenzene 79-127 | 61-134 |

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Twin Ports Testing
Klete Fallowfield
1301 North 3rd Street

Superior, WI 54880

Quality Assurance Report
Level II

L299471

July 03, 2007

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.

# Twin Ports Testing

1301 North 3rd Street
Superior, WI 54880

Alternate billing information:

Analysis/Container/Preservative

Chain of Custody
Page 1 of 1

Prepared by:
ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (800) 767-5859
FAX (615) 758-5859

Report to: Klete Fallowfield
Email: klete.fallowfield@twinportst

Project Description: Murphy Oil Tank #70
City/State Collected: Superior, WI

Phone: (715) 392-7114
FAX:
Client Project #: 99e-0935
Lab Project #: TWINPORWI-MURPHY

Collected by (print): Todd Flat
Site/Facility ID#: SUPERIOR, WI
P.O.#:

Collected by (signature): Todd Flat
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day .....200%
___ Next Day.....100%
___ Two Day.....50%
___ Three Day.....25%

Date Results Needed

Email? ___No X Yes
FAX? ___No ___Yes

Acctnum: TWINPORWI (lab use only)
Template/Prelogin: T44199/P213838
Cooler #: 6-21 (N6)
Shipped Via: FedEX Standard

| Sample ID | Comp/Grab | Matrix* | Depth | Date | Time | No. of Cntrs | RVOC GRO 60ml Amb/MeOH/Syr | TS 4oz Clr-NoPres | Remarks/Contaminant | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|
| S-1 | Grab | SS | 8"-10" | 6-25-07 | 10:00 | 2 | X | X | | L994710-01 |
| S-2 | | SS | | | 10:30 | 2 | X | X | | 02 |
| S-3 | | SS | | | 10:45 | 2 | X | X | | 03 |
| S-4 | | SS | | | 11:00 | 2 | X | X | | 04 |
| S-5 | | SS | | | 12:00 | | X | X | | 05 |
| S-6 | | SS | | | 12:15 | | X | X | | 06 |
| S-7 | | SS | | | 12:20 | | X | X | | 07 |
| S-8 | | SS | | | 12:30 | | X | X | | 08 |
| S-9 | ↓ | SS | ↓ | ↓ | 12:40 | ↓ | X | X | | 09 |

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Remarks:

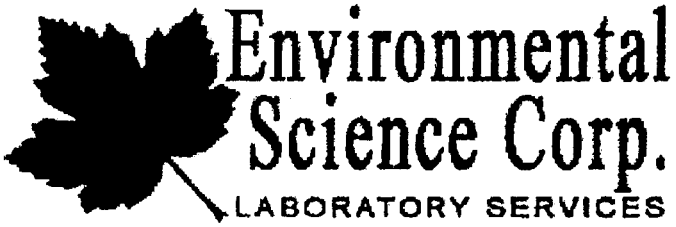
Flow _____ Other _____

9446 7857 8248

| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature) |
|---|---|---|---|
| Todd Flat | 6-25-07 | 13:58 | FedEx |
| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature) |
| Relinquished by: (Signature) | Date: | Time: | Received for lab by: (Signature) |

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____
Temp: 3.7°C Bottles Received: 18 + TB
Date: 6/26/07 Time: 9:00AM

Condition: OK (lab use only)
pH Checked: NCF:



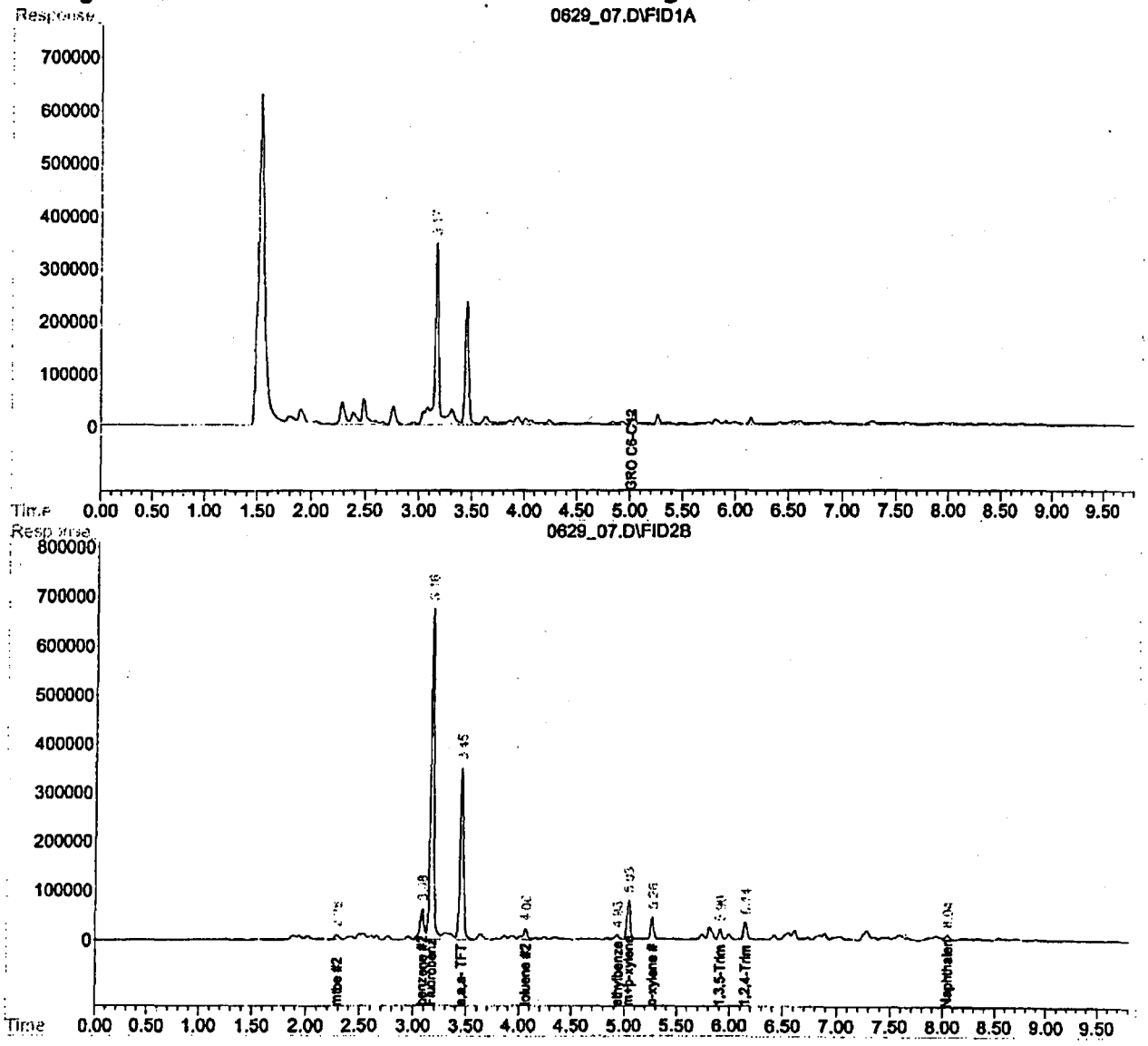

# CHROMATOGRAMS

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_07.D\FID1A.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_07.D\FID2B.CH
Acq On : 29 Jun 2007 10:54 pm Operator: 074
Sample : L299471-01 45x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 45.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:42 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

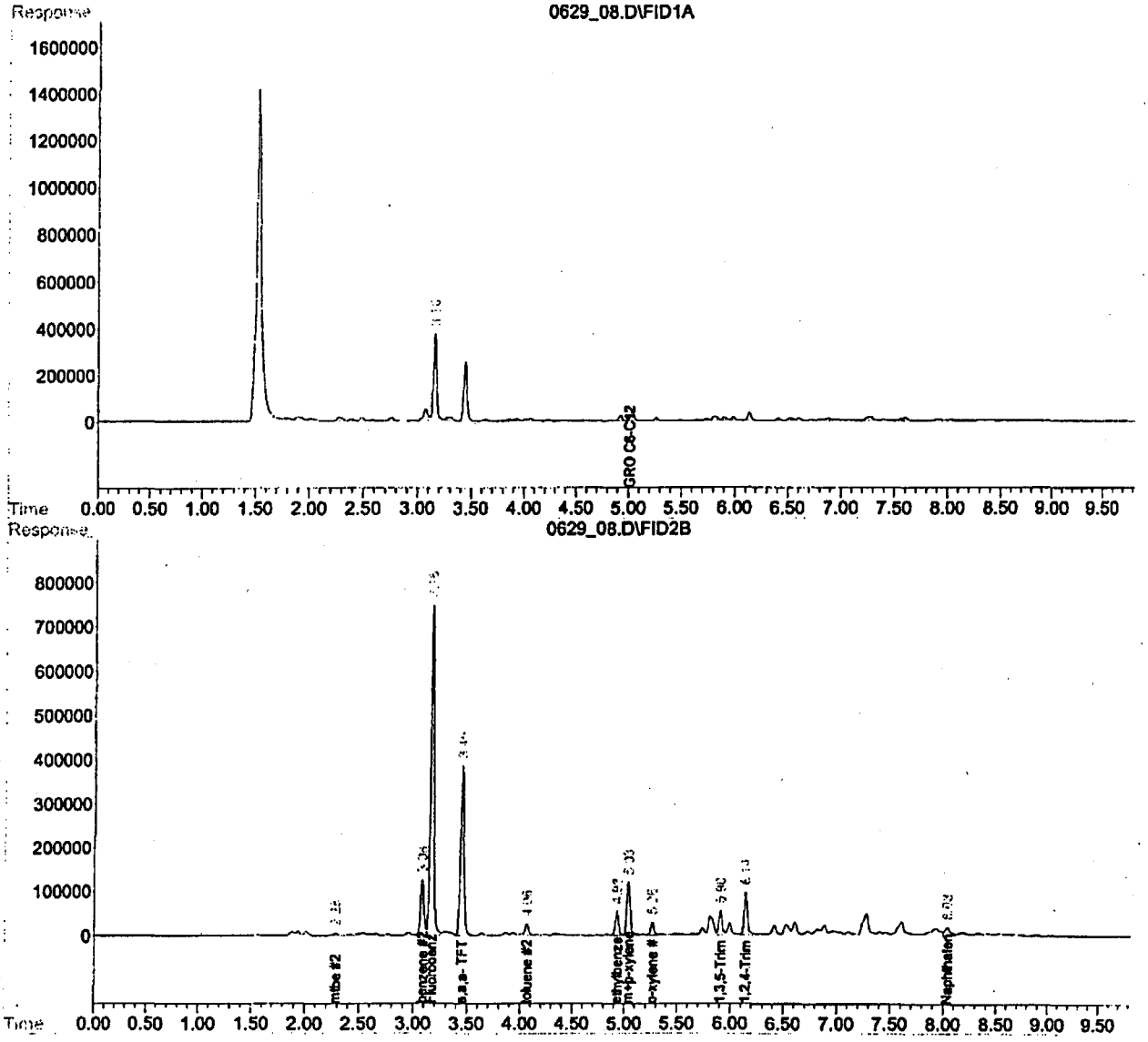


Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_08.D\FID1A.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_08.D\FID2B.CH
Acq On : 29 Jun 2007 11:23 pm Operator: 074
Sample : L299471-02 41.5x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 41.50
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:43 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

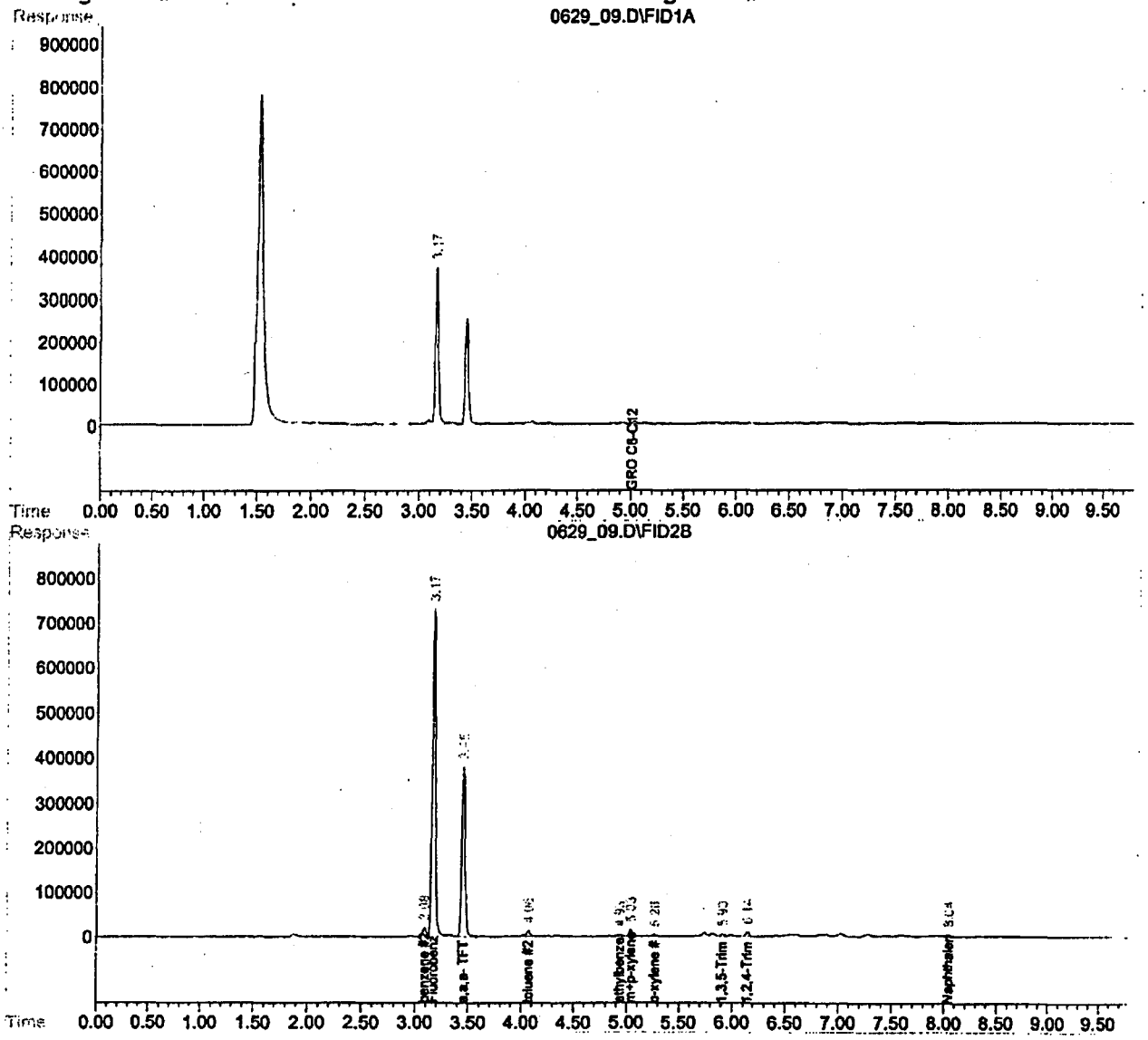


Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_09.D\FID1A.CH Vial: 9
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_09.D\FID2B.CH
Acq On : 29 Jun 2007 11:51 pm Operator: 074
Sample : L299471-03 50.5x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 50.50
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:43 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

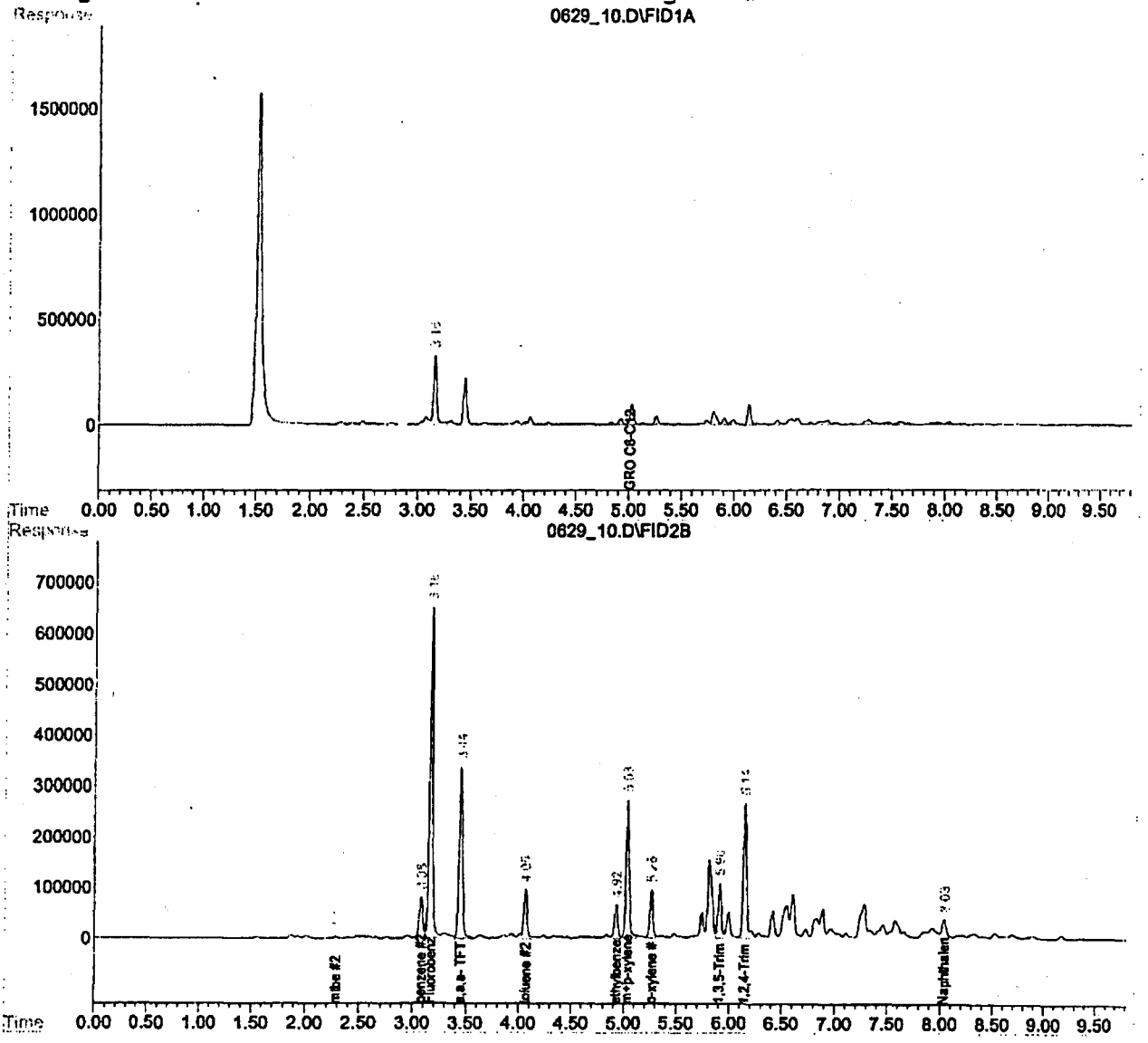


Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_10.D\FID1A.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_10.D\FID2B.CH
Acq On : 30 Jun 2007 12:19 am Operator: 074
Sample : L299471-04 49x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 49.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:44 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

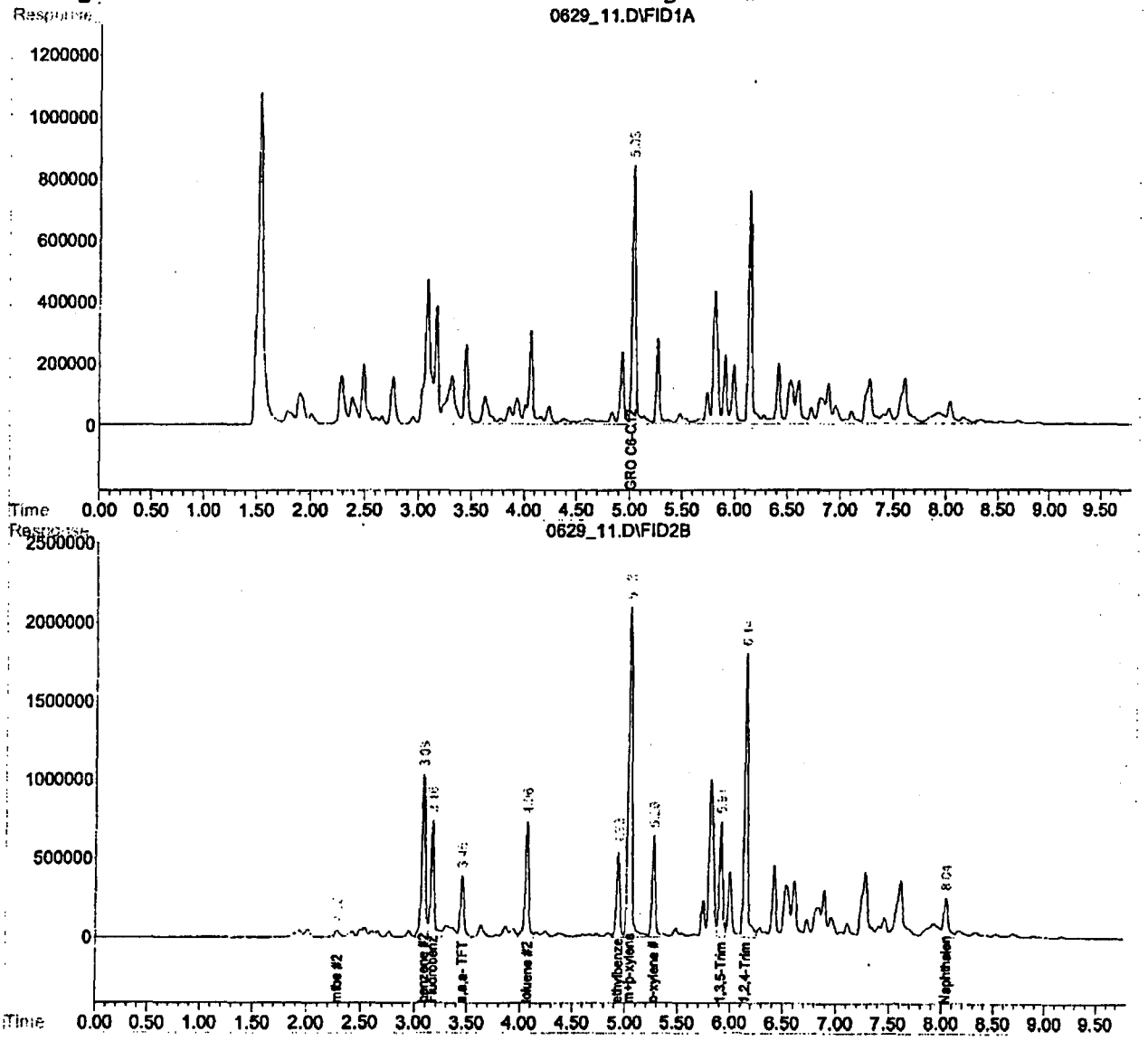


Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_11.D\FID1A.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_11.D\FID2B.CH
Acq On : 30 Jun 2007 12:50 am Operator: 074
Sample : L299471-06 50x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 50.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:44 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

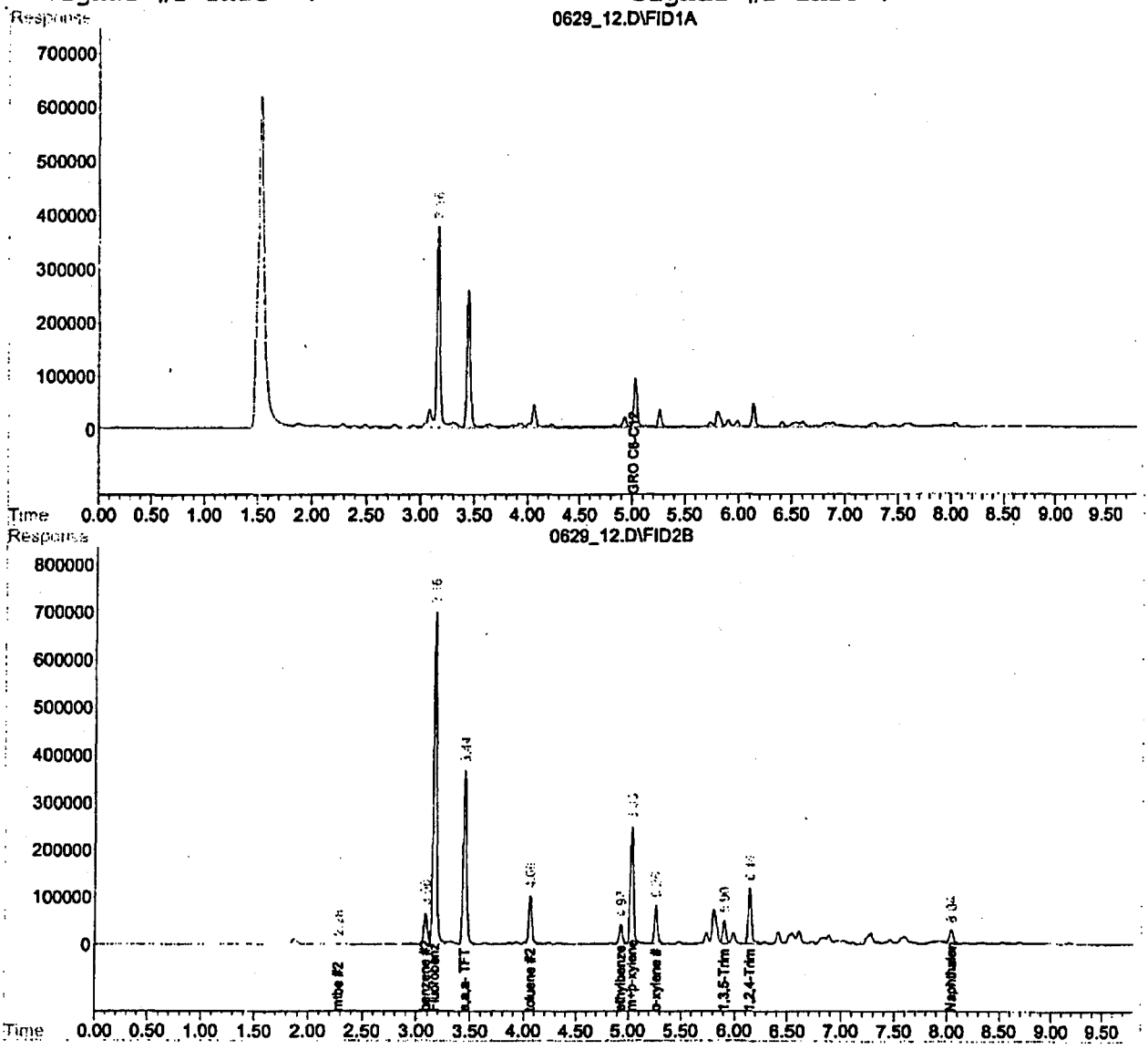


Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_12.D\FID1A.CH Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_12.D\FID2B.CH
Acq On : 30 Jun 2007 1:18 am Operator: 074
Sample : L299471-09 52x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 52.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:45 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

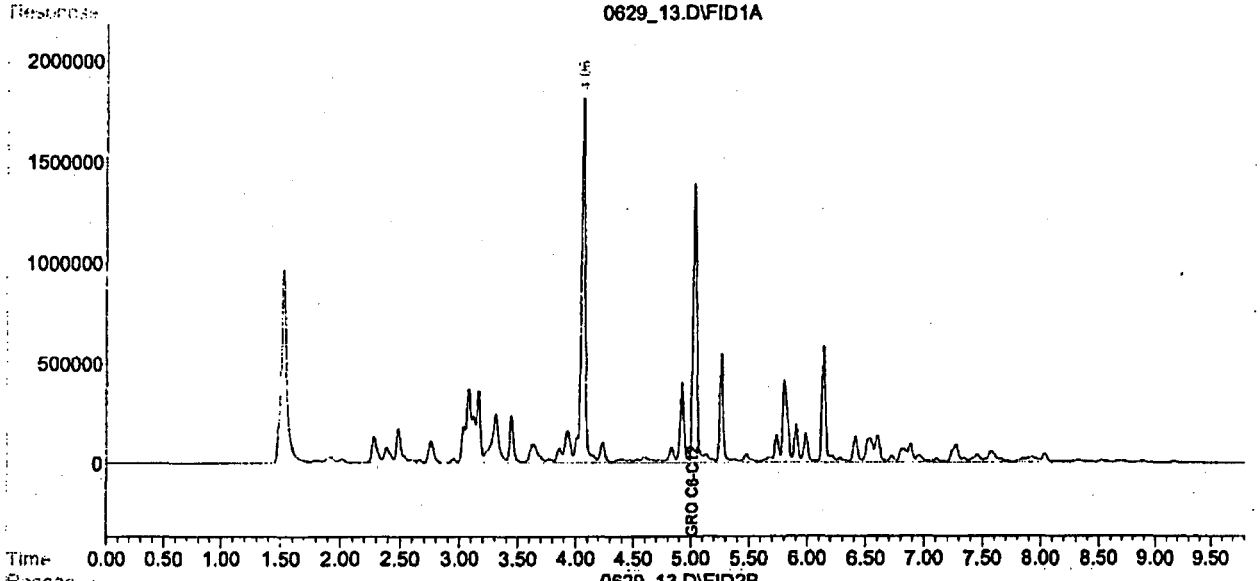


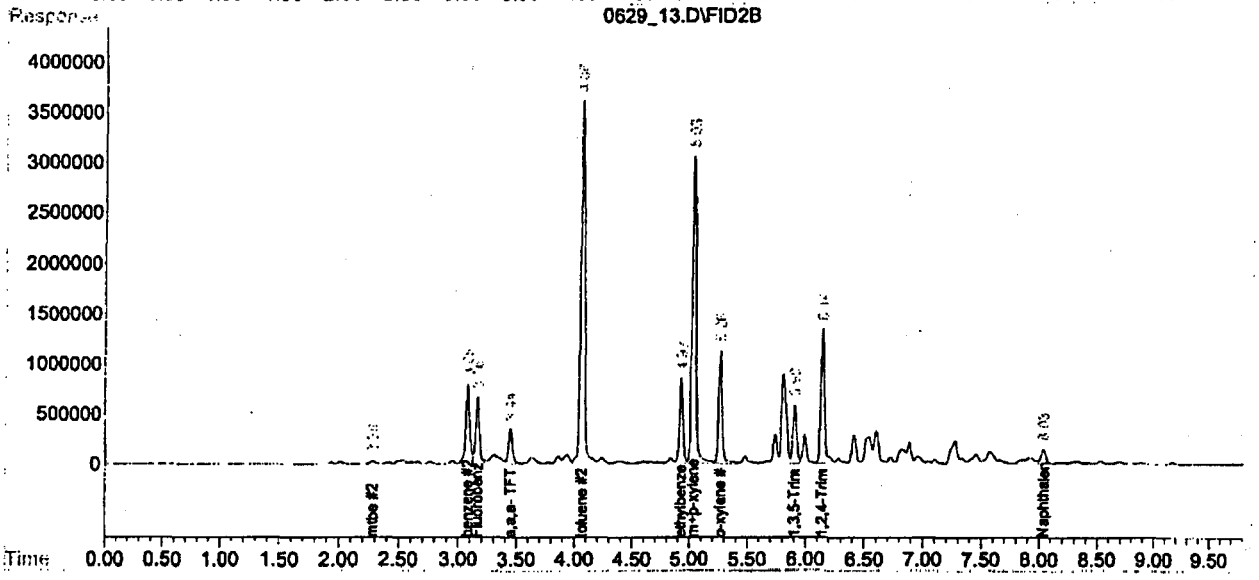
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_13.D\FID1A.CH Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_13.D\FID2B.CH
Acq On : 30 Jun 2007 1:47 am Operator: 074
Sample : L299471-05 75x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 75.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:46 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



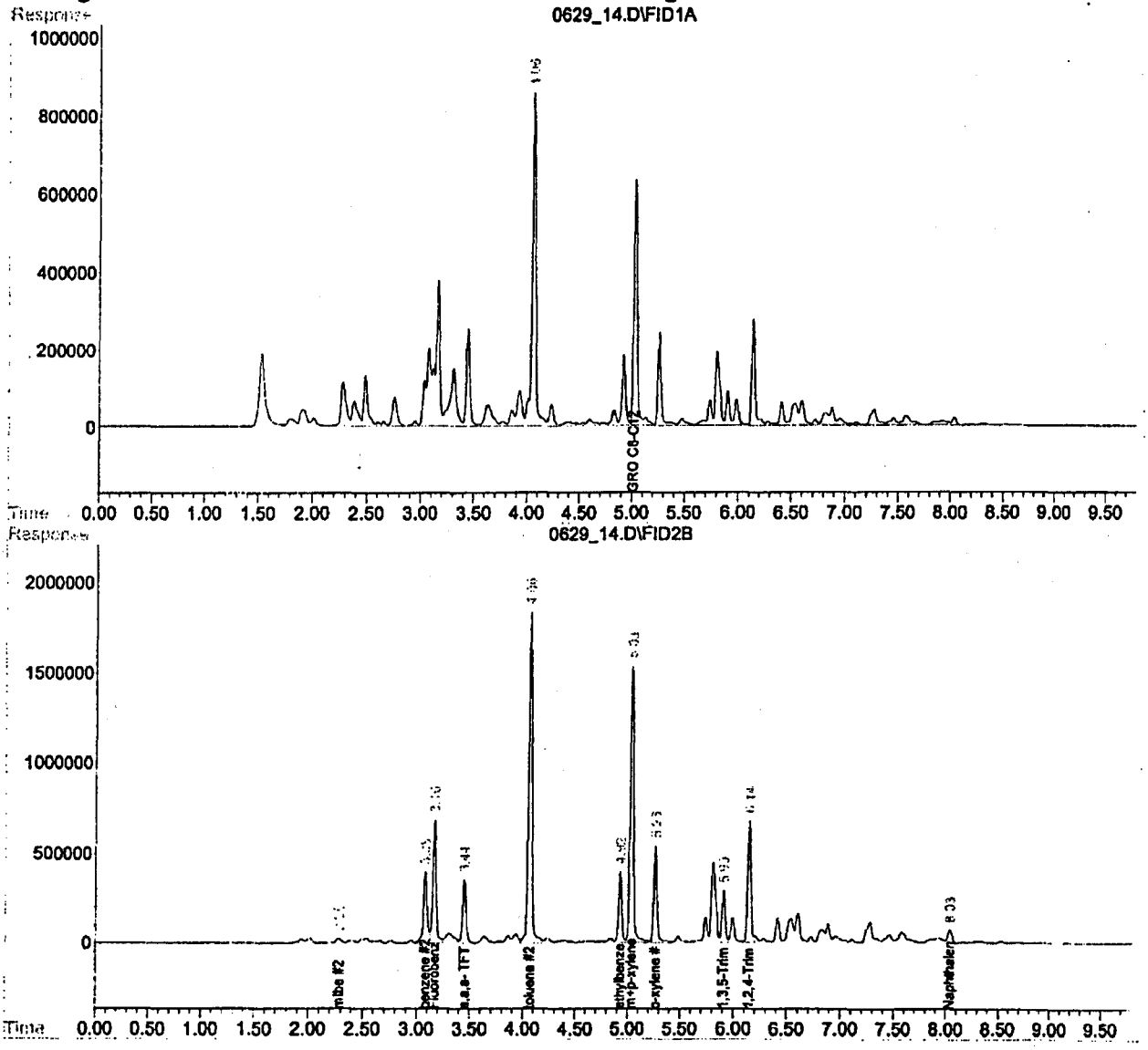



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_14.D\FID1A.CH Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_14.D\FID2B.CH
Acq On : 30 Jun 2007 2:16 am Operator: 074
Sample : L299471-07 920x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 920.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:47 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

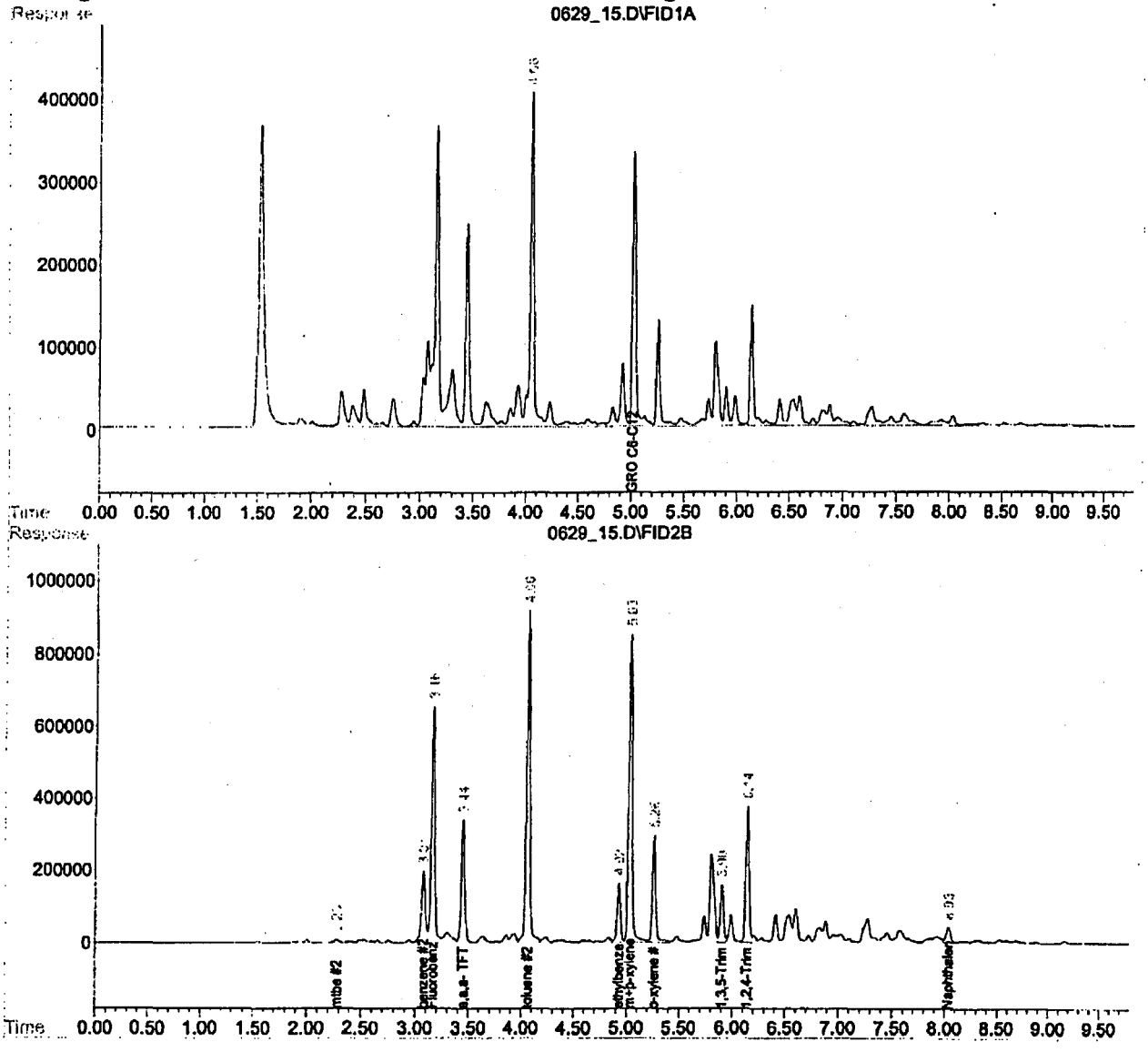


Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\062907\0629_15.D\FID1A.CH Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\062907\0629_15.D\FID2B.CH
Acq On : 30 Jun 2007 2:44 am Operator: 074
Sample : L299471-08 435x WG307627 PVOCGRO Inst : VOCGC3
Misc : soil 7F15079 100ppb 8015/8021 Multiplr: 435.00
IntFile Signal #1: events.e IntFile Signal #2: EVENTS2.E
Quant Time: Jul 1 13:47 2007 Quant Results File: PV03F25G.RES

Quant Method : C:\HPCHEM\1\METHODS\PV03F25G.M (Chemstation Integrator)
Title : WIS GRO VOCGC6
Last Update : Mon Jun 25 23:57:22 2007
Response via : Multiple Level Calibration
DataAcq Meth : BTEXGRO.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



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Todd Flak
Twin Ports Testing
1301 North 3rd Street

Superior, WI 54880

# Report Summary

Wednesday October 24, 2007

Report Number: L315581
Samples Received: 10/17/07
Client Project: 99E-0935

Description: Murphy Oil Tank 70

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: John Hawkins

John Hawkins, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, 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
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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Est. 1970

REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-10 8-10 IN

Collected By :
Collection Date : 10/15/07 13:00

ESC Sample # : L315581-01

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 71.8 | 0.100 | % | 2540G | 10/23/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | 0.042 | 0.034 | mg/kg | 8021 | 10/22/07 | 48.5 |
| Toluene | BDL | 0.34 | mg/kg | 8021 | 10/22/07 | 48.5 |
| Ethylbenzene | BDL | 0.034 | mg/kg | 8021 | 10/22/07 | 48.5 |
| m&p-Xylene | BDL | 0.068 | mg/kg | 8021 | 10/22/07 | 48.5 |
| o-Xylene | BDL | 0.034 | mg/kg | 8021 | 10/22/07 | 48.5 |
| Methyl tert-butyl ether | BDL | 0.068 | mg/kg | 8021 | 10/22/07 | 48.5 |
| Naphthalene | BDL | 0.34 | mg/kg | 8021 | 10/22/07 | 48.5 |
| 1,3,5-Trimethylbenzene | 0.084 | 0.068 | mg/kg | 8021 | 10/22/07 | 48.5 |
| 1,2,4-Trimethylbenzene | 0.23 | 0.068 | mg/kg | 8021 | 10/22/07 | 48.5 |
| GRO | BDL | 6.8 | mg/kg | 8015 | 10/22/07 | 48.5 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | % Rec. | 8021 | 10/22/07 | 48.5 |

ppm

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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The reported analytical results relate only to the sample submitted
Reported: 10/24/07 13:24 Printed: 10/24/07 14:45

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-11 8-10 IN

Collected By : Todd Flak
Collection Date : 10/15/07 13:15

ESC Sample # : L315581-02

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 72.0 | 0.100 | % | 2540G | 10/23/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | 0.22 | 0.033 | mg/kg | 8021 | 10/22/07 | 47 |
| Toluene | BDL | 0.33 | mg/kg | 8021 | 10/22/07 | 47 |
| Ethylbenzene | BDL | 0.033 | mg/kg | 8021 | 10/22/07 | 47 |
| m&p-Xylene | 0.17 | 0.065 | mg/kg | 8021 | 10/22/07 | 47 |
| o-Xylene | 0.13 | 0.033 | mg/kg | 8021 | 10/22/07 | 47 |
| Methyl tert-butyl ether | BDL | 0.065 | mg/kg | 8021 | 10/22/07 | 47 |
| Naphthalene | BDL | 0.33 | mg/kg | 8021 | 10/22/07 | 47 |
| 1,3,5-Trimethylbenzene | 0.096 | 0.065 | mg/kg | 8021 | 10/22/07 | 47 |
| 1,2,4-Trimethylbenzene | 0.13 | 0.065 | mg/kg | 8021 | 10/22/07 | 47 |
| GRO | BDL | 6.5 | mg/kg | 8015 | 10/22/07 | 47 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | % Rec. | 8021 | 10/22/07 | 47 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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The reported analytical results relate only to the sample submitted
Reported: 10/24/07 13:24 Printed: 10/24/07 14:45

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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-12 8-10 IN

Collected By : Todd Flak
Collection Date : 10/15/07 13:30

ESC Sample # : L315581-03

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 76.6 | 0.100 | % | 2540G | 10/23/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | 0.21 | 0.031 | mg/kg | 8021 | 10/22/07 | 48 |
| Toluene | 0.51 | 0.31 | mg/kg | 8021 | 10/22/07 | 48 |
| Ethylbenzene | 0.66 | 0.031 | mg/kg | 8021 | 10/22/07 | 48 |
| m&p-Xylene | 1.0 | 0.063 | mg/kg | 8021 | 10/22/07 | 48 |
| o-Xylene | 0.64 | 0.031 | mg/kg | 8021 | 10/22/07 | 48 |
| Methyl tert-butyl ether | BDL | 0.063 | mg/kg | 8021 | 10/22/07 | 48 |
| Naphthalene | 4.6 | 0.31 | mg/kg | 8021 | 10/22/07 | 48 |
| 1,3,5-Trimethylbenzene | 7.3 | 0.063 | mg/kg | 8021 | 10/22/07 | 48 |
| 1,2,4-Trimethylbenzene | 0.71 | 0.063 | mg/kg | 8021 | 10/22/07 | 48 |
| GRO | 170 | 6.3 | mg/kg | 8015 | 10/22/07 | 48 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 104. | | % Rec. | 8021 | 10/22/07 | 48 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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Reported: 10/24/07 13:24 Printed: 10/24/07 14:45

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12065 Lebanon Rd.
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-13 8-10 IN

Collected By : Todd Flak
Collection Date : 10/15/07 13:45

ESC Sample # : L315581-04

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 67.0 | 0.100 | % | 2540G | 10/23/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | 0.048 | 0.037 | mg/kg | 8021 | 10/22/07 | 50 |
| Toluene | BDL | 0.37 | mg/kg | 8021 | 10/22/07 | 50 |
| Ethylbenzene | 0.056 | 0.037 | mg/kg | 8021 | 10/22/07 | 50 |
| m&p-Xylene | 0.18 | 0.075 | mg/kg | 8021 | 10/22/07 | 50 |
| o-Xylene | 0.10 | 0.037 | mg/kg | 8021 | 10/22/07 | 50 |
| Methyl tert-butyl ether | BDL | 0.075 | mg/kg | 8021 | 10/22/07 | 50 |
| Naphthalene | 0.43 | 0.37 | mg/kg | 8021 | 10/22/07 | 50 |
| 1,3,5-Trimethylbenzene | 0.12 | 0.075 | mg/kg | 8021 | 10/22/07 | 50 |
| 1,2,4-Trimethylbenzene | 0.21 | 0.075 | mg/kg | 8021 | 10/22/07 | 50 |
| GRO | BDL | 7.5 | mg/kg | 8015 | 10/22/07 | 50 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 107. | | % Rec. | 8021 | 10/22/07 | 50 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-14 8-10 IN

Collected By :
Collection Date : 10/15/07 14:00

ESC Sample # : L315581-05

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 76.7 | 0.100 | % | 2540G | 10/24/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | 0.61 | 0.032 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Toluene | 3.7 | 0.32 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Ethylbenzene | 2.6 | 0.032 | mg/kg | 8021 | 10/22/07 | 49.5 |
| m&p-Xylene | 20. | 0.064 | mg/kg | 8021 | 10/22/07 | 49.5 |
| o-Xylene | 12. | 0.032 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Methyl tert-butyl ether | 0.081 | 0.064 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Naphthalene | 1.8 | 0.32 | mg/kg | 8021 | 10/22/07 | 49.5 |
| 1,3,5-Trimethylbenzene | 6.8 | 0.064 | mg/kg | 8021 | 10/22/07 | 49.5 |
| 1,2,4-Trimethylbenzene | 14. | 0.064 | mg/kg | 8021 | 10/22/07 | 49.5 |
| GRO | 180 | 6.4 | mg/kg | 8015 | 10/22/07 | 49.5 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | % Rec. | 8021 | 10/22/07 | 49.5 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-15 8-10 IN

Collected By :
Collection Date : 10/15/07 14:15

ESC Sample # : L315581-06

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 74.3 | 0.100 | % | 2540G | 10/24/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | 0.13 | 0.034 | mg/kg | 8021 | 10/22/07 | 50 |
| Toluene | BDL | 0.34 | mg/kg | 8021 | 10/22/07 | 50 |
| Ethylbenzene | BDL | 0.034 | mg/kg | 8021 | 10/22/07 | 50 |
| m&p-Xylene | 0.11 | 0.067 | mg/kg | 8021 | 10/22/07 | 50 |
| o-Xylene | 0.067 | 0.034 | mg/kg | 8021 | 10/22/07 | 50 |
| Methyl tert-butyl ether | BDL | 0.067 | mg/kg | 8021 | 10/22/07 | 50 |
| Naphthalene | BDL | 0.34 | mg/kg | 8021 | 10/22/07 | 50 |
| 1,3,5-Trimethylbenzene | 0.086 | 0.067 | mg/kg | 8021 | 10/22/07 | 50 |
| 1,2,4-Trimethylbenzene | 0.16 | 0.067 | mg/kg | 8021 | 10/22/07 | 50 |
| GRO | BDL | 6.7 | mg/kg | 8015 | 10/22/07 | 50 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 106. | | % Rec. | 8021 | 10/22/07 | 50 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

ESC Sample # : L315581-07

Site ID :

Project # : 99E-0935

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-16 8-10 IN

Collected By :
Collection Date : 10/15/07 14:30

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 71.4 | 0.100 | % | 2540G | 10/24/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | 0.083 | 0.035 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Toluene | BDL | 0.35 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Ethylbenzene | 0.069 | 0.035 | mg/kg | 8021 | 10/22/07 | 49.5 |
| m&p-Xylene | 0.40 | 0.069 | mg/kg | 8021 | 10/22/07 | 49.5 |
| o-Xylene | 0.21 | 0.035 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Methyl tert-butyl ether | BDL | 0.069 | mg/kg | 8021 | 10/22/07 | 49.5 |
| Naphthalene | BDL | 0.35 | mg/kg | 8021 | 10/22/07 | 49.5 |
| 1,3,5-Trimethylbenzene | 0.19 | 0.069 | mg/kg | 8021 | 10/22/07 | 49.5 |
| 1,2,4-Trimethylbenzene | 0.36 | 0.069 | mg/kg | 8021 | 10/22/07 | 49.5 |
| GRO | 8.7 | 6.9 | mg/kg | 8015 | 10/22/07 | 49.5 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 106. | | % Rec. | 8021 | 10/22/07 | 49.5 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24,2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-17 8-10 IN

Collected By : Todd Flak
Collection Date : 10/15/07 14:45

ESC Sample # : L315581-08

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 67.0 | 0.100 | % | 2540G | 10/24/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | BDL | 0.036 | mg/kg | 8021 | 10/22/07 | 49 |
| Toluene | BDL | 0.36 | mg/kg | 8021 | 10/22/07 | 49 |
| Ethylbenzene | 0.037 | 0.036 | mg/kg | 8021 | 10/22/07 | 49 |
| m&p-Xylene | 0.16 | 0.073 | mg/kg | 8021 | 10/22/07 | 49 |
| o-Xylene | 0.086 | 0.036 | mg/kg | 8021 | 10/22/07 | 49 |
| Methyl tert-butyl ether | BDL | 0.073 | mg/kg | 8021 | 10/22/07 | 49 |
| Naphthalene | BDL | 0.36 | mg/kg | 8021 | 10/22/07 | 49 |
| 1,3,5-Trimethylbenzene | 0.11 | 0.073 | mg/kg | 8021 | 10/22/07 | 49 |
| 1,2,4-Trimethylbenzene | 0.20 | 0.073 | mg/kg | 8021 | 10/22/07 | 49 |
| GRO | BDL | 7.3 | mg/kg | 8015 | 10/22/07 | 49 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 106. | | % Rec. | 8021 | 10/22/07 | 49 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24, 2007

Date Received : October 17, 2007
Description : Murphy Oil Tank 70

Sample ID : S-18 8-10 IN

Collected By :
Collection Date : 10/15/07 15:00

ESC Sample # : L315581-09

Site ID :

Project # : 99E-0935

| Parameter | Dry Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| Total Solids | 72.4 | 0.100 | % | 2540G | 10/24/07 | 1 |
| PVOCGRO | | | | | | |
| Benzene | BDL | 0.033 | mg/kg | 8021 | 10/22/07 | 47.5 |
| Toluene | BDL | 0.33 | mg/kg | 8021 | 10/22/07 | 47.5 |
| Ethylbenzene | BDL | 0.033 | mg/kg | 8021 | 10/22/07 | 47.5 |
| m&p-Xylene | BDL | 0.066 | mg/kg | 8021 | 10/22/07 | 47.5 |
| o-Xylene | BDL | 0.033 | mg/kg | 8021 | 10/22/07 | 47.5 |
| Methyl tert-butyl ether | BDL | 0.066 | mg/kg | 8021 | 10/22/07 | 47.5 |
| Naphthalene | BDL | 0.33 | mg/kg | 8021 | 10/22/07 | 47.5 |
| 1,3,5-Trimethylbenzene | BDL | 0.066 | mg/kg | 8021 | 10/22/07 | 47.5 |
| 1,2,4-Trimethylbenzene | BDL | 0.066 | mg/kg | 8021 | 10/22/07 | 47.5 |
| GRO | BDL | 6.6 | mg/kg | 8015 | 10/22/07 | 47.5 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | % Rec. | 8021 | 10/22/07 | 47.5 |

Results listed are dry weight basis.
BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Kevin Anderson
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

October 24, 2007

Date Received : October 17, 2007
Description :

Sample ID : TRIPBLANK MEOH

Collected By : Todd Flak
Collection Date : 10/15/07 00:00

ESC Sample # : L315581-10

Site ID :

Project # : 99E-0935

| Parameter | Result | Det. Limit | Units | Method | Date | Dil. |
|---|---|---|---|---|---|---|
| PVOCGRO | | | | | | |
| Benzene | BDL | 0.025 | mg/kg | 8021 | 10/22/07 | 50 |
| Toluene | BDL | 0.25 | mg/kg | 8021 | 10/22/07 | 50 |
| Ethylbenzene | BDL | 0.025 | mg/kg | 8021 | 10/22/07 | 50 |
| m&p-Xylene | BDL | 0.050 | mg/kg | 8021 | 10/22/07 | 50 |
| o-Xylene | BDL | 0.025 | mg/kg | 8021 | 10/22/07 | 50 |
| Methyl tert-butyl ether | BDL | 0.050 | mg/kg | 8021 | 10/22/07 | 50 |
| Naphthalene | BDL | 0.25 | mg/kg | 8021 | 10/22/07 | 50 |
| 1,3,5-Trimethylbenzene | BDL | 0.050 | mg/kg | 8021 | 10/22/07 | 50 |
| 1,2,4-Trimethylbenzene | BDL | 0.050 | mg/kg | 8021 | 10/22/07 | 50 |
| GRO | BDL | 5.0 | mg/kg | 8015 | 10/22/07 | 50 |
| Surrogate Recovery (70-130) | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | % Rec. | 8021 | 10/22/07 | 50 |

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Attachment A
List of Analytes with QC Qualifiers

| Sample # | Analyte | Qualifier |
|---|---|---|
| L315581-03 | GRO | E |
| L315581-05 | GRO | E |

Attachment B
Explanation of QC Qualifier Codes

| Qualifier | Meaning |
|---|---|
| E | GTL (EPA) - Greater than upper calibration limit: Actual value is known to be greater than the upper calibration range. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

| | Control Limits | | | (AQ) | (SS) |
|---|---|---|---|---|---|
| 2-Fluorophenol | 31-119 | Nitrobenzene-d5 | 43-118 | Dibromfluoromethane | 68-128 | 64-125 |
| Phenol-d5 | 12-134 | 2-Fluorobiphenyl | 45-128 | Toluene-d8 | 76-115 | 69-118 |
| 2,4,6-Tribromophenol | 51-141 | Terphenyl-d14 | 43-137 | 4-Bromofluorobenzene | 79-127 | 61-134 |

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
10/24/07 at 14:45:49

TSR Signing Reports: 341
R5 - Desired TAT

Need case narrative, chromatograms, TIC and QC for all TO-15 projects.

Sample: L315581-01 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-02 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-03 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-04 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-05 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-06 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-07 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-08 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-09 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

Sample: L315581-10 Account: TWINPORWI Received: 10/17/07 09:00 Due Date: 10/24/07 00:00 RPT Date: 10/24/07 13:24

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Twin Ports Testing
Todd Flak
1301 North 3rd Street

Superior, WI 54880

Quality Assurance Report
Level II

L315581

October 24, 2007

Laboratory Blank

| Analyte | Result | Units | Date Analyzed | Batch |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | < .001 | mg/kg | 10/22/07 13:27 | WG326691 |
| 1,3,5-Trimethylbenzene | < .001 | mg/kg | 10/22/07 13:27 | WG326691 |
| Benzene | < .0005 | mg/kg | 10/22/07 13:27 | WG326691 |
| Ethylbenzene | < .0005 | mg/kg | 10/22/07 13:27 | WG326691 |
| m&p-Xylene | < .001 | mg/kg | 10/22/07 13:27 | WG326691 |
| Methyl tert-butyl ether | < .001 | mg/kg | 10/22/07 13:27 | WG326691 |
| Naphthalene | < .005 | mg/kg | 10/22/07 13:27 | WG326691 |
| o-Xylene | < .0005 | mg/kg | 10/22/07 13:27 | WG326691 |
| Toluene | < .005 | mg/kg | 10/22/07 13:27 | WG326691 |
| GRO | < .1 | mg/kg | 10/22/07 13:27 | WG326691 |
| Total Solids | < .1 | % | 10/23/07 08:39 | WG326733 |
| Total Solids | < .1 | % | 10/24/07 09:25 | WG326831 |

Duplicate

| Analyte | Units | Result | Duplicate | RPD | Limit | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|
| Total Solids | % | 86.9 | 86.4 | 0.527 | 20 | L315568-01 | WG326733 |
| Total Solids | % | 86.5 | 87.2 | 0.788 | 20 | L315608-01 | WG326831 |

Laboratory Control Sample

| Analyte | Units | Known Val | Result | % Rec | Limit | Batch |
|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | .05 | 0.0534 | 107. | 59-138 | WG326691 |
| 1,3,5-Trimethylbenzene | mg/kg | .05 | 0.0536 | 107. | 66-132 | WG326691 |
| Benzene | mg/kg | .05 | 0.0503 | 101. | 78-141 | WG326691 |
| Ethylbenzene | mg/kg | .05 | 0.0501 | 100. | 69-133 | WG326691 |
| m&p-Xylene | mg/kg | .1 | 0.109 | 109. | 61-121 | WG326691 |
| Methyl tert-butyl ether | mg/kg | .05 | 0.0560 | 112. | 54-129 | WG326691 |
| Naphthalene | mg/kg | .05 | 0.0490 | 97.9 | 80-120 | WG326691 |
| o-Xylene | mg/kg | .05 | 0.0537 | 107. | 71-121 | WG326691 |
| Toluene | mg/kg | .05 | 0.0519 | 104. | 65-117 | WG326691 |
| GRO | mg/kg | .5 | 0.472 | 94.4 | 67-135 | WG326691 |
| Total Solids | % | 50 | 50.0 | 100. | 85-115 | WG326733 |
| Total Solids | % | 50 | 50.0 | 99.9 | 85-115 | WG326831 |

Laboratory Control Sample Duplicate

| Analyte | Units | LCSD Res | Ref Res | RPD | Limit | %Rec | Batch |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | 0.0547 | 0.0534 | 2.44 | 15 | 109 | WG326691 |
| 1,3,5-Trimethylbenzene | mg/kg | 0.0563 | 0.0536 | 4.93 | 15 | 113 | WG326691 |
| Benzene | mg/kg | 0.0554 | 0.0503 | 9.62 | 20 | 111 | WG326691 |
| Ethylbenzene | mg/kg | 0.0542 | 0.0501 | 7.95 | 20 | 108 | WG326691 |
| m&p-Xylene | mg/kg | 0.115 | 0.109 | 5.98 | 20 | 115 | WG326691 |
| Methyl tert-butyl ether | mg/kg | 0.0580 | 0.0560 | 3.39 | 20 | 116 | WG326691 |
| Naphthalene | mg/kg | 0.0501 | 0.0490 | 2.28 | 20 | 100 | WG326691 |
| o-Xylene | mg/kg | 0.0583 | 0.0537 | 8.29 | 20 | 117 | WG326691 |
| Toluene | mg/kg | 0.0569 | 0.0519 | 9.11 | 20 | 114 | WG326691 |
| GRO | mg/kg | 0.505 | 0.472 | 6.73 | 20 | 101 | WG326691 |

Matrix Spike

| Analyte | Units | MS Res | Ref Res | TV | % Rec | Limit | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | 2.39 | 0.00 | .05 | 95.5 | 80-120 | L315884-02 | WG326691 |
| 1,3,5-Trimethylbenzene | mg/kg | 2.44 | 0.00 | .05 | 97.5 | 80-120 | L315884-02 | WG326691 |
| Benzene | mg/kg | 2.41 | 0.00 | .05 | 96.3 | 80-120 | L315884-02 | WG326691 |

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Twin Ports Testing
Todd Flak
1301 North 3rd Street

Superior, WI 54880

Quality Assurance Report
Level II

L315581

October 24, 2007

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | mg/kg | 2.32 | 0.00 | .05 | 92.8 | 80-120 | L315884-02 | WG326691 |

Matrix Spike

| Analyte | Units | MS Res | Ref Res | TV | % Rec | Limit | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|---|
| m&p-Xylene | mg/kg | 5.00 | 0.00 | .1 | 100. | 80-120 | L315884-02 | WG326691 |
| Methyl tert-butyl ether | mg/kg | 2.50 | 0.00 | .05 | 100. | 80-120 | L315884-02 | WG326691 |
| Naphthalene | mg/kg | 1.96 | 0.00 | .05 | 78.6 | 80-120 | L315884-02 | WG326691 |
| o-Xylene | mg/kg | 2.49 | 0.00 | .05 | 99.7 | 80-120 | L315884-02 | WG326691 |
| Toluene | mg/kg | 2.44 | 0.00 | .05 | 97.8 | 80-120 | L315884-02 | WG326691 |
| GRO | mg/kg | 21.8 | 0.00 | .5 | 87.4 | 80-120 | L315884-02 | WG326691 |

Matrix Spike Duplicate

| Analyte | Units | MSD Res | Ref Res | RPD | Limit | %Rec | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | 2.70 | 2.39 | 12.2 | 23 | 108. | L315884-02 | WG326691 |
| 1,3,5-Trimethylbenzene | mg/kg | 2.73 | 2.44 | 11.3 | 19 | 109. | L315884-02 | WG326691 |
| Benzene | mg/kg | 2.71 | 2.41 | 11.9 | 20 | 108. | L315884-02 | WG326691 |
| Ethylbenzene | mg/kg | 2.61 | 2.32 | 11.6 | 20 | 104. | L315884-02 | WG326691 |
| m&p-Xylene | mg/kg | 5.56 | 5.00 | 10.7 | 20 | 111. | L315884-02 | WG326691 |
| Methyl tert-butyl ether | mg/kg | 2.73 | 2.50 | 8.95 | 20 | 109. | L315884-02 | WG326691 |
| Naphthalene | mg/kg | 2.52 | 1.96 | 24.9 | 20 | 101. | L315884-02 | WG326691 |
| o-Xylene | mg/kg | 2.78 | 2.49 | 10.8 | 20 | 111. | L315884-02 | WG326691 |
| Toluene | mg/kg | 2.74 | 2.44 | 11.2 | 20 | 109. | L315884-02 | WG326691 |
| GRO | mg/kg | 25.5 | 21.8 | 15.3 | 20 | 102. | L315884-02 | WG326691 |

Batch number /Run number / Sample number cross reference

WG326733: R338813: L315581-01 02 03 04
WG326691: R338815: L315581-01 02 03 04 05 06 07 08 09 10
WG326831: R339041: L315581-05 06 07 08 09

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

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1301 North 3rd Street

Superior, WI 54880

Quality Assurance Report
Level II

L315581

October 24, 2007

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.

Twin Ports Testing
1301 N. 3rd St.
Superior Wi
54880

Alternate billing information:

Report to: Todd Flak

Email to:

Project Description: Murphy Oil Tank 70

City/State Collected: Superior, Wi

Phone:
FAX:

Client Project #: 99e.0935

ESC Key:

Collected by: Todd Flak

Site/Facility ID#:

P.O.#:

Collected by (signature): Todd Flak

Packed on Ice N (Y)

Rush? ( Lab MUST Be Notified )
___ Same Day.....200%
___ Next Day.....100%
___ Two Day.....50%
___ Three Day.....25%

Date Results Needed:

Email? __No__Yes

FAX? __No__Yes

Analysis/Container/Preservative

| Sample ID | Comp/Grab | Matrix* | Depth | Date | Time | No. of Cntrs | pVac/1620 | Remarks/Contaminant | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|
| S-10 | Grab | ~~GW~~ SS | 8-10" | 10-15-07 | 1:00 | 2 | X | | L315581-01 |
| S-11 | Grab | GW | | | 1:15 | | | | 02 |
| S-12 | | | | | 1:30 | | | | 03 |
| S-13 | | | | | 1:45 | | | | 04 |
| S-14 | | | | | 2:00 | | | | 05 |
| S-15 | | | | | 2:15 | | | | 06 |
| S-16 | | | | | 2:30 | | | | 07 |
| S-17 | | | | | 2:45 | | | | 08 |
| S-18 | | | | | 3:00 | | | | 09 |
| TB | | | | | | | | | 10 |

Chain of Custody Page 1 of 1

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
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Mt. Juliet, TN 37122
Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

CoCode: (lab use only)
Template/Prelogin:
Shipped Via:

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

pH _____ Temp _____

Remarks: 8574 13563787

Flow _____ Other _____

| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature) | Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____ | Condition: (lab use only) |
|---|---|---|---|---|---|
| Todd Flak | 10.15.07 | 4:25 | Fed-Ex | | |
| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature) | Temp: 3.3°C | Bottles Received: 18+1 trip TB |
| Relinquished by: (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: 10.17.07 | Time: 900 |

pH Checked: NCF:

WISCONSIN
DEPT. OF NATURAL RESOURCES

**State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES**

Jim Doyle, Governor
Scott Hassett, Secretary
John Gozdzialski, Regional Director

Northern Region Headquarters
107 Sutliff Ave.
Rhinelander, Wisconsin 54501-3349
Telephone 715-365-8900
FAX 715-365-8932
TTY Access via relay - 711

August 2, 2007

Ms. Deb King
Pilko & Associates, LP
700 Louisiana Street, Suite 4500
Houston, TX 77002

Subject: Murphy Oil FOIA Request
Copy of Open Spill File
BRRTS # 04-16-549887

Dear Ms. King:

Attached is a complete copy of the only open spill case for Murphy Oil on Stinson Avenue in Superior. The spill occurred on June 6, 2007.

Open Environmental Repair (ERP) cases for Murphy Oil will be available in our Superior office on August 10 for your staff to review. Jim Hosch is in charge of those files. He can be reached at 715-392-0802 if you have other questions or concerns about those files.

You mentioned in your e-mail that you are not interested in the two Leaking Underground Storage Tank cases that have been reported to WDNR. Those files are here in the Rhinelander office, and if you change your mind, you should contact me at 715-365-8990.

If you need any further assistance, please call or e-mail me at Anna.Kazda@dnr.state.wi.us.

Sincerely,
NORTHERN REGION

Anna Kazda

Anna Kazda
Remediation and Redevelopment Program

cc: File

Jim Hosch, Superior

## Sager, John E - DNR

**From:** Sager, John E - DNR
**Sent:** Wednesday, July 25, 2007 9:21 AM
**To:** 'Dave_Beattie@murphyoilcorp.com'
**Subject:** RE: Surfactant

Hi Dave,

Since the spill is within a containment area I don't have a problem if you want to try it. It will be interesting to see if it works. Let me know the details of how you plan to deliver it to the soil, time frames, sampling plan etc.

---

**From:** Dave_Beattie@murphyoilcorp.com [mailto:Dave_Beattie@murphyoilcorp.com]
**Sent:** Monday, July 23, 2007 3:43 PM
**To:** Sager, John E - DNR
**Subject:** Fw: Surfactant

Below is the info. on the surfactant. The Marketing issue he is refering to is the area under our loading dock that is an ongoing remediation site.

Thanks
Dave
----- Forwarded by Dave Beattie/SUP/MOC on 07/23/2007 03:40 PM -----

**"King, Jeffrey J." <jking@GFNET.com>**
To: <Dave_Beattie@murphyoilcorp.com>
cc:
Subject: RE: Surfactant

07/23/2007 03:28 PM

Dave-

We have been using BioSolve at Marketing. It is made by the Westford Chemical Company (http://www.biosolve.com/). The website should give the information you need, but please let me know if I can help in anyway. Please let me know if you plan to use it, because it would be nice to be able to apply the product in such a way so that you can evaluate how effective it works in a soil environment. If you are working with John Sager (give him my best), let him know Jim Hosch approved its use at Marketing.

-Jeff

---

**From:**Dave_Beattie@murphyoilcorp.com [mailto:Dave_Beattie@murphyoilcorp.com]
**Sent:** Monday, July 23, 2007 3:04 PM
**To:** King, Jeffrey J.
**Subject:** Surfactant

Hey Jeff,

What is the name of the surfactant you guys are using at the loading dock? I want to run it past our spill guy at the DNR for our most recent Tk 70 spill and see if he would allow us to maybe use it to help speed things up, rather than just soaking it with water.

Thanks
Dave

--
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**Sager, John E - DNR**

---

**From:** Dave_Beattie@murphyoilcorp.com
**Sent:** Friday, July 13, 2007 2:43 PM
**To:** Sager, John E - DNR
**Subject:** 6/6/07 Tk 70 Gasoline spill
**Attachments:** Tk 70 Basin.pdf

Hi John,

Just got the results and sample diagram back. I scanned them in and they should be attached.

From what I can tell, the most contaminate area is south of S-8 to S-7(most contaminated) and S-4. There is some small hits at the other sites, but it seems most is concentrated south of S-8. This would make sense to me as this is where the free product initially flowed(came out a vent on east side of tank and then flowed south towards S-7). The product did get spread out as we were applying water in the initial response to keep vapors down, that probably why there is slight contamination North to S-9 and southwest to S-1,2,3,5,and 6.

What would you like us to do next? From our earlier discussions we had talked about maybe applying some more water(and recovering) a few more times, then taking some more samples and compare the results to the original analysis to see if the water soaking and normal evaporation are helping. Should we proceed in doing this?

Thanks. Please feel free to call with any questions.

Have a great weekend!!

Dave
715-398-8455

*(See attached file: Tk 70 Basin.pdf)*

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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.

**Twin Ports Testing, Inc.**
1301 N. 3rd St. • Superior, WI 54880 • 715-392-7114 • 800-373-2562 • FAX 715-392-7163
P.O. Box 16246 • Duluth, MN 55816-0246 • 218-722-1911
P.O. Box 2 • Virginia, MN 55792 • 218-741-5785
www.twinportstesting.com

July 10th, 2007

TPT #99E-0935

Mr. Dave Beattie
Murphy Oil, U.S.A
2407 Stinson Avenue
Superior, WI 54880

Re: Soil Sampling Locations and Analytical Results, Tank 70 Spill
Murphy Oil, U.S.A
Superior Refinery
2407 Stinson Avenue
Superior, WI 54880

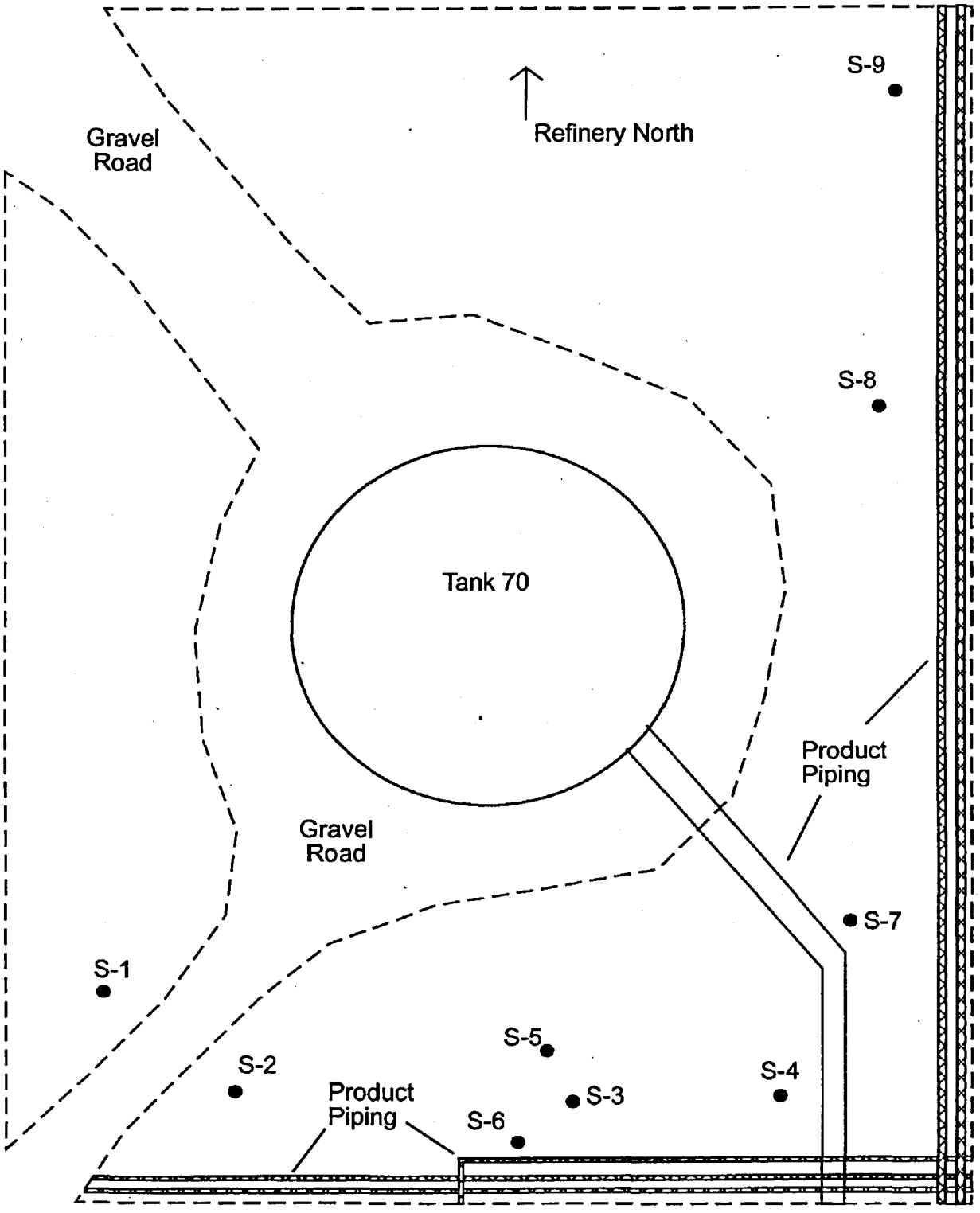
Dear Mr. Beattie,

Enclosed is a copy of the laboratory analytical results of the soil samples collected from the most recent tank 70 spill. Also included is a site map showing soil sampling locations. All samples were collected at approximately 8-10 inches below the surface. If you have any questions, please contact me at 715-392-7114.

Sincerely,
**Twin Ports Testing, Inc.**

Todd Flak

Todd Flak, Project Manager




Drawing Not to Scale

Twin Ports Testing

Tank 70 Spill Sampling Locations (S-1 through S-9)
Murphy Oil, Superior, WI

| | |
|---|---|
| DRAWN BY | TF |
| CHECKED BY | TF |
| APPR BY | TF |
| DATE | 06/27/07 |
| TPT NO. | 99e-0935 |
| FIGURE | 1 |

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Est. 1970

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street

Superior, WI 54880

# Report Summary

Thursday July 05, 2007

Report Number: L299471
Samples Received: 06/26/07
Client Project: 99E-0935

Description: Murphy Oil Tank #70

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: John Hawkins
John Hawkins, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, 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
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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9 Samples Reported: 07/03/07 12:15 Revised: 07/05/07 11:10

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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

ESC Sample # : L299471-01

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-1 8-10 IN

Collected By :
Collection Date : 06/25/07 10:00

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 69.0 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.49 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| Toluene | 0.14 | 0.074 | 0.33 | mg/kg | J | 8021 | 06/29/07 | 45 |
| Ethylbenzene | 0.081 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| m&p-Xylene | 0.48 | 0.015 | 0.065 | mg/kg | | 8021 | 06/29/07 | 45 |
| o-Xylene | 0.30 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| methyl tert-butyl ether | 0.28 | 0.0074 | 0.033 | mg/kg | | 8021 | 06/29/07 | 45 |
| Naphthalene | 0.13 | 0.074 | 0.33 | mg/kg | J | 8021 | 06/29/07 | 45 |
| 1,3,5-Trimethylbenzene | 0.097 | 0.015 | 0.065 | mg/kg | | 8021 | 06/29/07 | 45 |
| 1,2,4-Trimethylbenzene | 0.22 | 0.015 | 0.065 | mg/kg | | 8021 | 06/29/07 | 45 |
| GRO | 10. | 1.5 | 6.5 | mg/kg | | 8015 | 06/29/07 | 45 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/29/07 | 45 |

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
RDL = Reported Detection Limit = LOQ = PQL = EQL = MQL(TRRP)
Note:
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Reported: 07/03/07 12:15 Revised: 07/05/07 11:11

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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

ESC Sample # : L299471-02

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-2 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 10:30

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 75.0 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.63 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| Toluene | 0.13 | 0.068 | 0.28 | mg/kg | J | 8021 | 06/29/07 | 41.5 |
| Ethylbenzene | 0.27 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| m&p-Xylene | 0.56 | 0.014 | 0.055 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| o-Xylene | 0.16 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| methyl tert-butyl ether | 0.057 | 0.0068 | 0.028 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| Naphthalene | 0.24 | 0.068 | 0.28 | mg/kg | J | 8021 | 06/29/07 | 41.5 |
| 1,3,5-Trimethylbenzene | 0.20 | 0.014 | 0.055 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| 1,2,4-Trimethylbenzene | 0.49 | 0.014 | 0.055 | mg/kg | | 8021 | 06/29/07 | 41.5 |
| GRO | 9.6 | 1.4 | 5.5 | mg/kg | | 8015 | 06/29/07 | 41.5 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/29/07 | 41.5 |

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
RDL = Reported Detection Limit = LOQ = PQL = EQL = MQL(TRRP)
Note:
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

ESC Sample # : L299471-03

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-3 8-10 IN

Collected By :
Collection Date : 06/25/07 10:45

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 74.6 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.13 | 0.0083 | 0.034 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| Toluene | U | 0.083 | 0.34 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| Ethylbenzene | 0.039 | 0.0083 | 0.034 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| m&p-Xylene | 0.083 | 0.017 | 0.068 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| o-Xylene | 0.029 | 0.0083 | 0.034 | mg/kg | J | 8021 | 06/29/07 | 50.5 |
| methyl tert-butyl ether | U | 0.0083 | 0.034 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| Naphthalene | U | 0.083 | 0.34 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| 1,3,5-Trimethylbenzene | U | 0.017 | 0.068 | mg/kg | | 8021 | 06/29/07 | 50.5 |
| 1,2,4-Trimethylbenzene | 0.062 | 0.017 | 0.068 | mg/kg | J | 8021 | 06/29/07 | 50.5 |
| GRO | 2.3 | 1.7 | 6.8 | mg/kg | J | 8015 | 06/29/07 | 50.5 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/29/07 | 50.5 |

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
RDL = Reported Detection Limit = LOQ = PQL = EQL = MQL(TRRP)
Note:
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Reported: 07/03/07 12:15 Revised: 07/05/07 11:11

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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

ESC Sample # : L299471-04

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Site ID : SUPERIOR, WI

Sample ID : S-4 8-10 IN

Project # : 99E-0935

Collected By : Todd Flak
Collection Date : 06/25/07 11:00

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 71.4 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.60 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| Toluene | 0.66 | 0.081 | 0.34 | mg/kg | | 8021 | 06/30/07 | 49 |
| Ethylbenzene | 0.49 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| m&p-Xylene | 1.8 | 0.016 | 0.069 | mg/kg | | 8021 | 06/30/07 | 49 |
| o-Xylene | 0.70 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| methyl tert-butyl ether | 0.12 | 0.0081 | 0.034 | mg/kg | | 8021 | 06/30/07 | 49 |
| Naphthalene | 0.57 | 0.081 | 0.34 | mg/kg | | 8021 | 06/30/07 | 49 |
| 1,3,5-Trimethylbenzene | 0.56 | 0.016 | 0.069 | mg/kg | | 8021 | 06/30/07 | 49 |
| 1,2,4-Trimethylbenzene | 1.8 | 0.016 | 0.069 | mg/kg | | 8021 | 06/30/07 | 49 |
| GRO | 18. | 1.6 | 6.9 | mg/kg | | 8015 | 06/30/07 | 49 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/30/07 | 49 |

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
RDL = Reported Detection Limit = LOQ = PQL = EQL = MQL(TRRP)
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

ESC Sample # : L299471-05

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-5 8-10 IN

Collected By :
Collection Date : 06/25/07 12:00

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 73.2 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 8.3 | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| Toluene | 34. | 0.12 | 0.51 | mg/kg | E | 8021 | 06/30/07 | 75 |
| Ethylbenzene | 8.3 | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| m&p-Xylene | 30. | 0.025 | 0.10 | mg/kg | | 8021 | 06/30/07 | 75 |
| o-Xylene | 12. | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| methyl tert-butyl ether | 1.2 | 0.012 | 0.051 | mg/kg | | 8021 | 06/30/07 | 75 |
| Naphthalene | 2.9 | 0.12 | 0.51 | mg/kg | | 8021 | 06/30/07 | 75 |
| 1,3,5-Trimethylbenzene | 4.2 | 0.025 | 0.10 | mg/kg | | 8021 | 06/30/07 | 75 |
| 1,2,4-Trimethylbenzene | 12. | 0.025 | 0.10 | mg/kg | | 8021 | 06/30/07 | 75 |
| GRO | 260 | 2.5 | 10. | mg/kg | E | 8015 | 06/30/07 | 75 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 107. | | | % Rec. | | 8021 | 06/30/07 | 75 |

Results listed are dry weight basis.
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-6 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 12:15

ESC Sample # : L299471-06

Site ID : SUPERIOR, WI

Project # : 99E-0935

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 65.5 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 6.9 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| Toluene | 4.6 | 0.082 | 0.38 | mg/kg | | 8021 | 06/30/07 | 50 |
| Ethylbenzene | 3.4 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| m&p-Xylene | 13. | 0.016 | 0.076 | mg/kg | | 8021 | 06/30/07 | 50 |
| o-Xylene | 4.1 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| methyl tert-butyl ether | 1.3 | 0.0082 | 0.038 | mg/kg | | 8021 | 06/30/07 | 50 |
| Naphthalene | 3.5 | 0.082 | 0.38 | mg/kg | | 8021 | 06/30/07 | 50 |
| 1,3,5-Trimethylbenzene | 3.5 | 0.016 | 0.076 | mg/kg | | 8021 | 06/30/07 | 50 |
| 1,2,4-Trimethylbenzene | 12. | 0.016 | 0.076 | mg/kg | | 8021 | 06/30/07 | 50 |
| GRO | 170 | 1.6 | 7.6 | mg/kg | | 8015 | 06/30/07 | 50 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | | % Rec. | | 8021 | 06/30/07 | 50 |

Results listed are dry weight basis.
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RDL = Reported Detection Limit = LOQ = PQL = EQL = MQL(TRRP)
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

ESC Sample # : L299471-07

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-7 8-10 IN

Collected By :
Collection Date : 06/25/07 12:20

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 70.4 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 52. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| Toluene | 210 | 1.5 | 6.5 | mg/kg | | 8021 | 06/30/07 | 920 |
| Ethylbenzene | 48. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| m&p-Xylene | 180 | 0.30 | 1.3 | mg/kg | | 8021 | 06/30/07 | 920 |
| o-Xylene | 71. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| methyl tert-butyl ether | 16. | 0.15 | 0.65 | mg/kg | | 8021 | 06/30/07 | 920 |
| Naphthalene | 17. | 1.5 | 6.5 | mg/kg | | 8021 | 06/30/07 | 920 |
| 1,3,5-Trimethylbenzene | 26. | 0.30 | 1.3 | mg/kg | | 8021 | 06/30/07 | 920 |
| 1,2,4-Trimethylbenzene | 80. | 0.30 | 1.3 | mg/kg | | 8021 | 06/30/07 | 920 |
| GRO | 1700 | 30. | 130 | mg/kg | | 8015 | 06/30/07 | 920 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 103. | | | % Rec. | | 8021 | 06/30/07 | 920 |

Results listed are dry weight basis.
U = ND (Not Detected)
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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-8 8-10 IN

Collected By : Todd Plak
Collection Date : 06/25/07 12:30

ESC Sample # : L299471-08

Site ID : SUPERIOR, WI

Project # : 99E-0935

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 79.9 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 12. | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| Toluene | 48. | 0.72 | 2.7 | mg/kg | | 8021 | 06/30/07 | 435 |
| Ethylbenzene | 9.1 | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| m&p-Xylene | 45. | 0.14 | 0.54 | mg/kg | | 8021 | 06/30/07 | 435 |
| o-Xylene | 18. | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| methyl tert-butyl ether | 2.2 | 0.072 | 0.27 | mg/kg | | 8021 | 06/30/07 | 435 |
| Naphthalene | 4.6 | 0.72 | 2.7 | mg/kg | | 8021 | 06/30/07 | 435 |
| 1,3,5-Trimethylbenzene | 6.4 | 0.14 | 0.54 | mg/kg | | 8021 | 06/30/07 | 435 |
| 1,2,4-Trimethylbenzene | 20. | 0.14 | 0.54 | mg/kg | | 8021 | 06/30/07 | 435 |
| GRO | 360 | 14. | 54. | mg/kg | | 8015 | 06/30/07 | 435 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 104. | | | % Rec. | | 8021 | 06/30/07 | 435 |

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REPORT OF ANALYSIS

Klete Fallowfield
Twin Ports Testing
1301 North 3rd Street
Superior, WI 54880

July 05,2007

ESC Sample # : L299471-09

Site ID : SUPERIOR, WI

Project # : 99E-0935

Date Received : June 26, 2007
Description : Murphy Oil Tank 70

Sample ID : S-9 8-10 IN

Collected By : Todd Flak
Collection Date : 06/25/07 12:40

| Parameter | Dry Result | MDL | RDL | Units | Q | Method | Date | Dil. |
|---|---|---|---|---|---|---|---|---|
| Total Solids | 68.7 | 0.0330 | 0.100 | % | | 2540G | 07/03/07 | 1 |
| PVOCGRO | | | | | | | | |
| Benzene | 0.48 | 0.0086 | 0.038 | mg/kg | | 8021 | 06/30/07 | 52 |
| Toluene | 0.70 | 0.086 | 0.38 | mg/kg | | 8021 | 06/30/07 | 52 |
| Ethylbenzene | 0.29 | 0.0086 | 0.038 | mg/kg | | 8021 | 06/30/07 | 52 |
| m&p-Xylene | 1.7 | 0.017 | 0.076 | mg/kg | | 8021 | 06/30/07 | 52 |
| o-Xylene | 0.61 | 0.0086 | 0.038 | mg/kg | | 8021 | 06/30/07 | 52 |
| methyl tert-butyl ether | 0.045 | 0.0086 | 0.038 | mg/kg | J6 | 8021 | 06/30/07 | 52 |
| Naphthalene | 0.41 | 0.086 | 0.38 | mg/kg | J6 | 8021 | 06/30/07 | 52 |
| 1,3,5-Trimethylbenzene | 0.26 | 0.017 | 0.076 | mg/kg | | 8021 | 06/30/07 | 52 |
| 1,2,4-Trimethylbenzene | 0.86 | 0.017 | 0.076 | mg/kg | | 8021 | 06/30/07 | 52 |
| GRO | 11. | 1.7 | 7.6 | mg/kg | | 8015 | 06/30/07 | 52 |
| Surrogate Recovery (70-130) | | | | | | | | |
| a,a,a-Trifluorotoluene(PID) | 105. | | | % Rec. | | 8021 | 06/30/07 | 52 |

Results listed are dry weight basis.
U = ND (Not Detected)
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RDL = Reported Detection Limit = LOQ = PQL = EQL = MQL(TRRP)
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Attachment A
List of Analytes with QC Qualifiers

| Sample # | Analyte | Qualifier |
|---|---|---|
| L299471-01 | Toluene | J |
| | Naphthalene | J |
| L299471-02 | Toluene | J |
| | Naphthalene | J |
| L299471-03 | o-Xylene | J |
| | 1,2,4-Trimethylbenzene | J |
| | GRO | J |
| L299471-05 | Toluene | E |
| | GRO | E |
| L299471-09 | methyl tert-butyl ether | J6 |
| | Naphthalene | J6 |

Attachment B
Explanation of QC Qualifier Codes

| Qualifier | Meaning |
|---|---|
| E | GTL (EPA) - Greater than upper calibration limit: Actual value is known to be greater than the upper calibration range. |
| J | (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

| | Control Limits | | | | (AQ) | (SS) |
|---|---|---|---|---|---|---|
| 2-Fluorophenol | 31-119 | Nitrobenzene-d5 | 43-118 | Dibromfluoromethane | 68-128 | 64-125 |
| Phenol-d5 | 12-134 | 2-Fluorobiphenyl | 45-128 | Toluene-d8 | 76-115 | 69-118 |
| 2,4,6-Tribromophenol | 51-141 | Terphenyl-d14 | 43-137 | 4-Bromofluorobenzene | 79-127 | 61-134 |

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
07/05/07 at 11:11:22

TSR Signing Reports: 341
R5 - Desired TAT

Need case narrative, chromatograms, TIC and QC for all TO-15 projects.

Sample: L299471-01 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-02 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-03 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-04 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-05 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-06 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-07 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-08 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

Sample: L299471-09 Account: TWINPORWI Received: 06/26/07 09:00 Due Date: 07/03/07 00:00 RPT Date: 07/03/07 12:15

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Twin Ports Testing
Klete Fallowfield
1301 North 3rd Street

Superior, WI 54880

Quality Assurance Report
Level II

L299471

July 05, 2007

Laboratory Blank

| Analyte | Result | Units | Date Analyzed | Batch |
|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | < .001 | mg/kg | 06/29/07 22:26 | WG307627 |
| 1,3,5-Trimethylbenzene | < .001 | mg/kg | 06/29/07 22:26 | WG307627 |
| Benzene | < .0005 | mg/kg | 06/29/07 22:26 | WG307627 |
| Ethylbenzene | < .0005 | mg/kg | 06/29/07 22:26 | WG307627 |
| m&p-Xylene | < .001 | mg/kg | 06/29/07 22:26 | WG307627 |
| methyl tert-butyl ether | < .001 | mg/kg | 06/29/07 22:26 | WG307627 |
| Naphthalene | < .005 | mg/kg | 06/29/07 22:26 | WG307627 |
| o-Xylene | < .0005 | mg/kg | 06/29/07 22:26 | WG307627 |
| Toluene | < .005 | mg/kg | 06/29/07 22:26 | WG307627 |
| GRO | < .1 | mg/kg | 06/29/07 22:26 | WG307627 |
| Total Solids | < .1 | % | 07/03/07 08:23 | WG307852 |
| Total Solids | < .1 | % | 07/03/07 08:28 | WG307853 |

Duplicate

| Analyte | Units | Result | Duplicate | RPD | Limit | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|
| Total Solids | % | 85.2 | 84.6 | 0.705 | 20 | L299467-20 | WG307852 |
| Total Solids | % | 87.4 | 89.0 | 1.85 | 20 | L299531-01 | WG307853 |

Laboratory Control Sample

| Analyte | Units | Known Val | Result | % Rec | Limit | Batch |
|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | .05 | 0.0508 | 102. | 80-120 | WG307627 |
| 1,3,5-Trimethylbenzene | mg/kg | .05 | 0.0501 | 100. | 80-120 | WG307627 |
| Benzene | mg/kg | .05 | 0.0485 | 97.0 | 80-120 | WG307627 |
| Ethylbenzene | mg/kg | .05 | 0.0463 | 92.5 | 80-120 | WG307627 |
| m&p-Xylene | mg/kg | .1 | 0.102 | 102. | 80-120 | WG307627 |
| methyl tert-butyl ether | mg/kg | .05 | 0.0510 | 102. | 80-120 | WG307627 |
| Naphthalene | mg/kg | .05 | 0.0497 | 99.4 | 80-120 | WG307627 |
| o-Xylene | mg/kg | .05 | 0.0497 | 99.4 | 80-120 | WG307627 |
| Toluene | mg/kg | .05 | 0.0481 | 96.1 | 80-120 | WG307627 |
| GRO | mg/kg | .5 | 0.441 | 88.1 | 80-120 | WG307627 |
| Total Solids | % | 50 | 50.0 | 100. | 85-115 | WG307852 |
| Total Solids | % | 50 | 50.0 | 100. | 85-115 | WG307853 |

Laboratory Control Sample Duplicate

| Analyte | Units | LCSD Res | Ref Res | RPD | Limit | %Rec | Batch |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | 0.0519 | 0.0508 | 2.24 | 20 | 104 | WG307627 |
| 1,3,5-Trimethylbenzene | mg/kg | 0.0515 | 0.0501 | 2.68 | 20 | 103 | WG307627 |
| Benzene | mg/kg | 0.0469 | 0.0485 | 3.28 | 20 | 94 | WG307627 |
| Ethylbenzene | mg/kg | 0.0472 | 0.0463 | 2.09 | 20 | 94 | WG307627 |
| m&p-Xylene | mg/kg | 0.106 | 0.102 | 4.17 | 20 | 106 | WG307627 |
| methyl tert-butyl ether | mg/kg | 0.0441 | 0.0510 | 14.4 | 20 | 88 | WG307627 |
| Naphthalene | mg/kg | 0.0443 | 0.0497 | 11.6 | 20 | 89 | WG307627 |
| o-Xylene | mg/kg | 0.0512 | 0.0497 | 2.97 | 20 | 102 | WG307627 |
| Toluene | mg/kg | 0.0486 | 0.0481 | 1.08 | 20 | 97 | WG307627 |
| GRO | mg/kg | 0.434 | 0.441 | 1.42 | 20 | 87 | WG307627 |

Matrix Spike

| Analyte | Units | MS Res | Ref Res | TV | % Rec | Limit | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | 2.86 | 0.590 | .05 | 87.2 | 80-120 | L299471-09 | WG307627 |
| 1,3,5-Trimethylbenzene | mg/kg | 2.48 | 0.180 | .05 | 88.3 | 80-120 | L299471-09 | WG307627 |
| Benzene | mg/kg | 2.60 | 0.330 | .05 | 87.5 | 80-120 | L299471-09 | WG307627 |

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Klete Fallowfield
1301 North 3rd Street

Superior, WI 54880

Quality Assurance Report
Level II

L299471

July 05, 2007

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | mg/kg | 2.41 | 0.200 | .05 | 84.9 | 80-120 | L299471-09 | WG307627 |

Matrix Spike

| Analyte | Units | MS Res | Ref Res | TV | % Rec | Limit | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|---|
| m&p-Xylene | mg/kg | 5.92 | 1.20 | .1 | 90.7 | 80-120 | L299471-09 | WG307627 |
| methyl tert-butyl ether | mg/kg | 2.02 | 0.0310 | .05 | 76.7 | 80-120 | L299471-09 | WG307627 |
| Naphthalene | mg/kg | 2.27 | 0.280 | .05 | 76.7 | 80-120 | L299471-09 | WG307627 |
| o-Xylene | mg/kg | 2.79 | 0.420 | .05 | 91.0 | 80-120 | L299471-09 | WG307627 |
| Toluene | mg/kg | 2.78 | 0.480 | .05 | 88.4 | 80-120 | L299471-09 | WG307627 |
| GRO | mg/kg | 30.1 | 7.80 | .5 | 85.9 | 80-120 | L299471-09 | WG307627 |

Matrix Spike Duplicate

| Analyte | Units | MSD Res | Ref Res | RPD | Limit | %Rec | Ref Samp | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | mg/kg | 2.84 | 2.86 | 0.674 | 20 | 86.4 | L299471-09 | WG307627 |
| 1,3,5-Trimethylbenzene | mg/kg | 2.48 | 2.48 | 0.124 | 20 | 88.4 | L299471-09 | WG307627 |
| Benzene | mg/kg | 2.63 | 2.60 | 0.963 | 20 | 88.5 | L299471-09 | WG307627 |
| Ethylbenzene | mg/kg | 2.42 | 2.41 | 0.584 | 20 | 85.4 | L299471-09 | WG307627 |
| m&p-Xylene | mg/kg | 5.94 | 5.92 | 0.400 | 20 | 91.2 | L299471-09 | WG307627 |
| methyl tert-butyl ether | mg/kg | 2.11 | 2.02 | 4.20 | 20 | 80.0 | L299471-09 | WG307627 |
| Naphthalene | mg/kg | 2.35 | 2.27 | 3.10 | 20 | 79.4 | L299471-09 | WG307627 |
| o-Xylene | mg/kg | 2.80 | 2.79 | 0.574 | 20 | 91.6 | L299471-09 | WG307627 |
| Toluene | mg/kg | 2.80 | 2.78 | 0.671 | 20 | 89.2 | L299471-09 | WG307627 |
| GRO | mg/kg | 29.1 | 30.1 | 3.46 | 20 | 82.0 | L299471-09 | WG307627 |

Batch number /Run number / Sample number cross reference

WG307627: R324221: L299471-01 02 03 04 05 06 07 08 09
WG307852: R324429: L299471-01 02 03 04 05
WG307853: R324430: L299471-06 07 08 09

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

ENVIRONMENTAL
SCIENCE CORP.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Twin Ports Testing
Klete Fallowfield
1301 North 3rd Street

Superior, WI 54880

Quality Assurance Report
Level II

L299471

July 05, 2007

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.

## Sager, John E - DNR

**From:** Sager, John E - DNR
**Sent:** Tuesday, June 12, 2007 2:06 PM
**To:** 'Dave_Beattie@murphyoilcorp.com'
**Subject:** RE: 7000 gallon spill remediation information

Thank you Dave,

The approach you described is acceptable to me. Be aware that if contaminant concentrations do not decrease to acceptable levels the Department may request additional investigation or remedial action.

---

**From:** Dave_Beattie@murphyoilcorp.com [mailto:Dave_Beattie@murphyoilcorp.com]
**Sent:** Tuesday, June 12, 2007 1:55 PM
**To:** Sager, John E - DNR
**Cc:** Liz_Lundmark@murphyoilcorp.com; Kollin_Schade@murphyoilcorp.com
**Subject:** 7000 gallon spill remediation information

Hi John,

As per our conversation this afternoon, we plan on doing the following for our 6/6/07 Tank 70 spill site of 7000 gallons of gasoline onto the soil/clay in the lined tank dike basin:

- Continue flooding the area a few more times, letting the water saturate the affected area and allowing the gasoline to gravitate up to the surface on top of the water. We will vacuum up the gasoline impacted water and process it through our system for recovery and treatment.

- We will then take a few samples from the affected area a few inches down in the clay(but above the liner) to get an idea of how contaminated the site remains.

- Any rain water in the Tk 70 basin will be contained on-site, vacuumed up, and treated within our system. The three tank dike drains going into and out of the Tank 70 basin are closed and have a lock and tag applied so that they can not be accidentally opened. These could and may be opened to let rain water that has accumulated in other tank basins into the Tank 70 basin(normal rain water drainage) for additional flooding. This water would then be vacuumed up and put through our system, and not allowed off-site.

- After getting the sampling results back, we can discuss further. We would also continue flooding the area and sample again at a later date to see if we are making any progress through flooding and normal evaporation.

- We will also look at the monitoring well analysis when they are sampled for the wells that are currently in the basin to see if there is any migration of product beneath the liner.

- No dirt will be removed at this time.

Please let me know if you have any questions. I will forward the analysis to you when its completed.

Thanks
Dave

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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.

## Sager, John E - DNR

**From:** Bauer, Ann E - DNR
**Sent:** Thursday, June 07, 2007 5:17 PM
**To:** Burns, Lance P - DNR
**Cc:** Bauer, Ann E - DNR; DMA WEM Duty Officer; Drew, James M - DHFS; Hosch, James A - DNR; Sager, John E - DNR; Richard, Philip E - DNR
**Subject:** nor06062007_01.doc

**Attachments:** nor06062007_01.doc

nor06062007_01.doc (116 KB)

04-16-549887

**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**

| | | |
|---|---|---|
| **Date & Military Time of Incident:** 06/06/2007 2100hrs | **Date & Military Time Reported:** 06/06/2007 2222hrs | **Spill File #** NOR06062007_01 **BRRTS #** |
| **Person Reporting:** DISPATCHER | **Representing:** WI STATE PATROL | **Phone #** 608-846-8521 **Fax #** |
| **Responsible Party (RP) / Spiller:** MURPHEY OIL | **RP Decision Based On:** PROTOCOL | **Phone #** 715-398-8455 **Fax #** |
| **RP Address:** 2407 STINSON | | **City** SUPERIOR **State** WI **Zip Code** |
| **RP Contact Name & Title:** DAVID BEATTIE | | **Phone #** **Fax #** |
| **Substance Involved:** GASOLINE | **Amount & Units Released:** 7000 GALLONS | **Amount & Units Recovered:** CONTAINED |

☐ Solid ☐ Semisolid ☒ Liquid ☐ Gas Color: Odor:

| | | |
|---|---|---|
| **Exact Location Of Incident: (including street name, bldg. #, mileage, etc.)** 2407 STINSON | | **Facility Name / Property Owner:** MURPHY OIL |
| ☐ **City** ☐ **Village** ☒ **Township** | **County** DOUGLAS | **Latitude/Longitude** deg. ' '', deg. ' '' |
| **DNR Region:** NOR | **1/4 1/4 Sec T N R** ☐ **E** ☐ **W** | **Weather Conditions:** |

**Cause of Incident:**
FAULTY TANK GAUGE CAUSING OVERFILL INTO CONTAINMENT BERM

**Spilled Substance Impact To: (check X all that apply)**
- ☐ Air ☐ Potential
- ☐ Concrete/Asphalt ☐ Potential
- ☐ Contained/Recovered
- ☐ Groundwater ☐ Potential
- ☐ Private Well ☐ Potential
- ☐ Sanitary Sewer ☐ Potential
- ☐ Soil ☐ Potential
- ☐ Storm Sewer ☐ Potential
- ☐ Surface Water ☒ Potential
  Name: NEWTON CREEK
- ☐ Other:

**Spill Cause and/or Site:**
- ☐ Ag Coop/Food Factory
- ☐ Airport Facility ☐ Railroad Facility
- ☐ Construction, Excavation, Wrecking, Quarry, Mine
- ☐ Gas/Service Station/Garage/Auto Dealer/Repair Shop
- ☐ Hydraulic Line Break
- ☐ Industrial Facility ☐ Paper Mill ☐ Chemical Co.
- ☒ Pipeline/Terminal/Tank Farm/Oil Jobber/Wholesaler
- ☐ Private Property (home/farm)
- ☐ Public Property (city, state, church, school, etc.)
- ☐ Transportation Accident, Fuel Tank Spill
- ☐ Transportation Accident, Load Spill
- ☐ Utility Co. Power Generating/Transfer Facility
- ☐ Other:

**Action Taken By Spiller:**
- ☐ Cleanup Method:
  - ☐ Absorbent
  - ☐ Excavation
  - ☒ VAC TRUCK
- ☒ Containment
- ☒ Contractor Hired
  Name: WALKER SERVICES
- ☐ Monitor
- ☐ No Action Needed
- ☐ No Action Taken
- ☐ Waste Destination:
- ☐ Other:

**Injuries?** ☐ Yes ☒ No If yes how many? **Has An Evacuation Occurred?** ☐ Yes ☒ No **Potential?** ☐ Yes ☒ No

**Are There Any Resource Damages?** ☐ Yes ☒ No ☐ Potential **What Kind?**

**Other Agencies Notified: (check first column, if notified; check both columns, if on the scene)**

| | | |
|---|---|---|
| ☐ ☐ Fire Department | ☐ ☐ Local DNR | ☐ ☐ EPA |
| ☐ ☐ Local Law Enforcement | ☐ ☐ Div. Emerg. Mgt. | ☒ ☐ Nat'l Resp Ctr 800-442-8802 |
| ☐ ☐ LEPC or Local Emer. Mgt. | ☐ ☐ Coast Guard | ☐ ☐ Chemtrec 800-424-9300 |
| ☐ ☐ Level A/Level B Team | ☐ ☐ DHFS 608-258-0099 | ☐ ☐ Other: |

**Incident Commander:**
DAVID BEATTIE
**Phone #** 715-398-8455

| | | | |
|---|---|---|---|
| Prepared By: DAVID WOODBURY | Phone # | Date: 06/06/2007 | Rpt'd To DATCP? ☐ Yes ☒ No Date: Tnsfed. To DATCP ☐ Yes ☐ No Date: |
| Person Notified: LANCE BURNS | Phone # 715-376-4159 | Date: 60/62/007 Time: 2232 | Spill Packet Sent? ☐ Yes ☐ No Date: To: |
| Investigated By: | Sign: | Date: | Transferred to ERP ☐ Yes ☐ No Date: Case # |
| Spill Coordinator Signoff: | | Date: | NFA Letter Sent? ☐ Yes ☐ No Date: Incident Closed? ☐ Yes ☐ No Date: |

☐ See Additional Comments On Reverse (Please, print page 2 of 2)

| Date and Military Time Of Incident: hrs | Responsible Party: |
|---|---|

**Additional Comments :**

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

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

# 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: David Beattie Phone: 398-8455
Date: 6/6/07 Position: Env. Engineer

2) Discharge Information
Date: 6/6/07 Time: 2217
Amount Released: ~7000 gallons Duration:
Material/Product: Gasoline Response Time: 1 hour
Specific Location: K70 - East Side
How was spill detected: Gauge/Tank Check
Cause: Bad gauge on Tank

If necessary, continue on back

3) Additonal Information
Physical Characteristics (i.e. solid,liquid or gas): Liquid
Chemical Properties: Gasoline
Possible Hazards: Fire, Benzene
Immediate Corrective Action/Clean-up: Soaking area w/water. Recover w/ Vac truck Closed transfers. Cavitated out of tank to bring down level
People/Companies Performing the Action: Murphy, Walker Contr. Sys.
Speed and Movement of Discharge(if any): None
Actual/Potential Impacts to Human Health(if any): Possible Fire
Actual/Potential Impacts to Environment(if any): None - Lined K Dyke
Weather Conditions(i.e. precipitation, wind speed and direction): 5-10 mph East wind 45° Nighttime
Agencies On-scene During Spill(if any): None
Further action needed(if any): Will soak area with water and vacuum up. Remove Dirt
Amount reaching Navigable Waters: None
Total Oil Storage Capacity of Tanks/Lines Material was Discharged From: 50,239 bbls = 2,110,038 gallons
Adequate Secondary Containment: Yes
Steps taken to Reduce Possibility of Recurrence:
Enforcement Actions(if any):
Effectiveness of Monitoring Equipment(if any): Some Monitoring

Original: Refinery Manager CC: Operations Manager, Environmental Manager
**When completed, FAX to (715) 365-8932 attn. - RR Program Assist**

# Hazardous Substance Discharge Call Log

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.

| Time of Call | Agency | Phone # | Person Contacted | Comments/Follow Up Action required by Agency |
|---|---|---|---|---|
| 2218 ~~2218~~ | National Response Center | 800-424-8802 | Belmas | 837783 Petty Officer Woodbury → Called more detail report |
| 2227 | Wisconsin Emergency Gov't | 800-943-0003 | WDNR | → Calling Duty Officer |
| 2229 | Coast Guard MSO | 720-5286 | Johnson Heacox | 218-522-0707 |
| 2242 | Douglas Cnty. Emergency Gov't | 395-1391 | | Left Message w/ Keith Kessler |
| 2240 | DNR - Water and Soil | 715-365-8959 | | Left message w/ John Sagen |
| | DNR - Air | 715-365-8958 | | — |
| | DNR - Haz. Waste(if hazardous) | 392-7831 | | — |
| | Fire Dept. (If needed) | 394-0227 or 911 | | — |
| | Police Dept. (If needed) | 395-7234 or 911 | | — |

Signature of Person Making Calls _____

Title Environ. Engineer