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Gannett Fleming

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August 13, 2014
File #34265.003-C

Ms. Erin Endsley
Wisconsin Department of Natural Resources
Superior Service Center
1701 North 4th Street
Superior, WI 54880

Re: Remediation Progress Report for the Calumet Marine Terminal Release Site
Superior, Wisconsin
WDNR BRRTS No. 03-16-000320

Dear Erin:

On behalf of Calumet Superior LLC (Calumet), Gannett Fleming, Inc. is submitting this remediation progress report for the Calumet Marine Terminal release site (WDNR BRRTS# 03-16-000320) in Superior. The report presents analytical results from soil samples collected at the site in July and September 2007, September 2009, and May 2010. In addition, this progress report includes background information on the site and a "bullet-point" summary of its remedial history for reference, because the site was administered by the Wisconsin Department of Commerce (Commerce) between August 2005 and June 2011 and the Department of Safety and Professional Services between July 2011 and July 2013. Periodic reporting of remediation site progress to the Wisconsin Department of Natural Resources (WDNR) is required pursuant to ss. NR 700.11(1) and 724.13(3), Wisconsin Administrative Code. A completed certification page for the report is also attached.

Pertinent Site Background Information

The Calumet Marine Terminal site is located along the south shore of St. Louis Bay (to Lake Superior) at a ship loading slip, approximately 2,000 feet north of Winter Street in the City of Superior. Figure 1 is a site location map. The site is located in the NE 1/4 of the NE 1/4 of Section 16, Township 49 North, Range 14 West of Douglas County.

The site and property adjacent to the site are currently vacant. However, property in this area is currently and has historically been used for industrial purposes. The ship loading slip is immediately west of the site. Approximately 2,200 feet south of the site is a former petroleum terminal that was operated by Amoco. This terminal and other nearby properties associated

Gannett Fleming, Inc.
8025 Excelsior Drive • Madison, WI 53717 1900
t: 608.836.1500 • f: 608.831.3337
www.gannettfleming.com

with the terminal are currently undergoing petroleum contamination remediation (e.g., BRRTS #02-16-000331, #02-16-117873, and #02-16-297979). Amoco has identified the presence of dissolved- and free-phase hydrocarbons in and on the groundwater approximately 300 feet east and 1,100 feet south of Calumet's former Marine Terminal. Figure 2 shows Calumet's Marine Terminal site (leased from the C. Reiss Company by Calumet), some of the monitoring wells, and the estimated lateral extent of dissolved- and free-phase contamination associated with the Amoco sites, as of August 2004.

Calumet's Marine Terminal site was formerly used as a petroleum product loading facility. An underground pipeline, which originated at Calumet's Superior refinery, transported unleaded and possibly leaded gasoline, No. 1 fuel oil, and No. 2 fuel oil to this site for off-loading into ships. According to Twin Ports Testing's (TPT) March 15, 1991, *Tank Excavation Observation* report addressed to Murphy Oil (Murphy) and the WDNR, two underground storage tanks (USTs) and one aboveground tank (AST) were formerly located at the site. The two USTs consisted of an 8,500-gallon steel tank (8 feet by 22 feet), which held ballast water released from ships loading at the slip, and a 1,000-gallon steel tank (3 feet by 14 feet), which was part of the site's spill containment system that was used to contain spilled petroleum products. The AST was used to separate oil from the ballast water. Figure 3 is a site plan showing the locations of all three tanks. Itasca Petroleum Tank Testing (Itasca) of Superior provided additional details in its December 12, 1990, *Tank Removal Report: Murphy West Marine Terminal Dock* also on file with the WDNR.

- Based on Itasca's December 1990 report, the November/December 1990 excavations associated with the removal of the 1,000- and 8,500-gallon USTs extended about 5 feet and 10 feet below ground surface (bgs), respectively. Itasca reported that a) the 8,500-gallon UST was attached to concrete anchors, b) the 1,000-gallon UST was encased in concrete, and c) there was not any underground piping associated with either of these two USTs. TPT did not observe any holes in either of the USTs. Water was encountered about 4 feet bgs in the 1,000-gallon UST basin and between 5 and 6 feet bgs in the 8,500-gallon UST basin. Following the removal of the USTs, TPT observed a sheen on top of the water that accumulated in each UST basin.

- Soil samples SS#1 through SS#5 collected by TPT in December 1990, after the USTs were removed, identified the presence of petroleum-impacted soil, as shown on Figure 3.

- Gannett Fleming's September 2005 *Results of Site Investigation and Request for Site Closure* report to Commerce identified one Geoprobe soil sample (GP-1) out of seven (GP-1 through GP-7) with a benzene concentration above its Wisconsin Administrative Code NR 720 residual contaminant level (RCL) of 0.0055 milligrams per kilogram (mg/kg) at that time, as shown in Table 1. Groundwater samples collected from GP-1 and GP-4 had petroleum-related concentrations below applicable state standards, as summarized in Table 2. Based on the six Geoprobe borings advanced outside of the November/December 1990 excavated areas, as presented in Table 3, subsurface conditions consist of:

    - At least 4 feet of industrial fill east of the former location of the 1,000-gallon UST (GP-2 and GP-3) and south of the former location of the 8,500-gallon UST (GP-4 and GP-5).
    - Native red-brown clay east (GP-6) and north (GP-7) of the former location of the 8,500-gallon UST.

- Commerce (the lead state agency in September 2005) determined that the site could be conditionally closed, provided the site was included on the WDNR's Geographic Information System (GIS) database of locations where residual soil contamination remains.

- Since Murphy did not own the property, Murphy elected to remove the residual soil contamination in the vicinity of GP-1 in an attempt to obtain an unconditional closure. In July 2007, a small volume of soil/fill (less than 5 cubic yards) was excavated at the former location of GP-1 and disposed of off site at a licensed landfill. However, follow-up soil samples contained benzene with concentrations above its applicable generic NR 720 RCL for the soil to groundwater pathway. Attachment A provides copies of the laboratory analytical reports and chain-of-custody records for soil samples collected from July 2007 through May 2010.

July 2007 Soil Sampling and Results

On July 11, 2007, Gannett Fleming field staff supervised the removal of soil in the area of GP-1. Lakehead Constructors of Superior supplied and operated the excavator. Soil sidewall samples were field-screened with a photo-ionization detector (PID) as the excavation progressed, and soil confirmation samples (E, N, S, and W sample IDs) were collected when the PID readings were at approximate background levels. Each sample was collected approximately 2.5 feet bgs. The soil samples were placed in laboratory-supplied containers and shipped via overnight courier to Siemens Water Technology Corp. of Rothschild (Wisconsin laboratory certification #737053130) for analysis of diesel range organics (DRO), gasoline range organics (GRO), petroleum volatile organic compounds (PVOCs), polycyclic aromatic hydrocarbons (PAHs), and lead. Figure 3 shows the limits of the July 2007 excavation and locations of the soil samples.

Soil encountered in the excavated area consisted of black silty-sand fill, with some construction debris (i.e., concrete). The excavation extended until groundwater was encountered, or about 3 feet bgs. No samples were collected from the excavation base. The excavation was backfilled following the collection of the soil samples.

Page 2 of Table 4 summarizes the laboratory analytical results, as well as the field-screening PID values, for the July 2007 soil samples. Benzene concentrations in the samples ranged from 0.151 (N) to 0.603 (W) mg/kg, all above the current generic NR 720 RCL of 0.00512 mg/kg for benzene. Other parameters that attained or exceeded NR 720 standards at one or more sample locations include toluene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and lead.

September 2007 Soil Sampling and Results

On September 12, 2007, Gannett Fleming field staff, along with Dave Beattie of Murphy, collected four soil samples (E-1, N-1, S-1, and W-1) approximately 5 feet beyond the perimeter of the July 2007 excavation. These samples were collected with the intent of defining the extent of soil with concentrations above the applicable generic clean-up values. Figure 3 shows the locations of the September 2007 samples. A shovel was used to collect each soil sample from approximately 1 foot bgs, and a PID was used to field-screen each sample for the presence of organic vapors. Each sample was placed in laboratory-supplied containers and shipped via overnight courier to Siemens for analysis of DRO, GRO, PVOCs, and PAHs.

Page 3 of Table 4 summarizes the laboratory analytical results, as well as the field-screening PID values, for the September 2007 soil samples. Benzene concentrations in the samples ranged from 0.089 (N-1) to 0.285 (W-1) mg/kg, all lower than the July 2007 samples, but still above the current generic NR 720 RCL of 0.00512 mg/kg for benzene. Other detected parameters that attained or exceeded NR 720 standards at one or more sample locations include toluene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and naphthalene.

September 2009 Soil Sampling and Results

On September 10, 2009, Gannett Fleming field staff collected four soil samples (E-15, N-15, S-15, and W-15) approximately 15 feet beyond the perimeter of the July 2007 excavation, as shown on Figure 3. A pick and shovel were used to collect each soil sample from 0.5 to 1 foot bgs, and a PID was used for field-screening. Each sample was placed in laboratory-supplied containers and shipped via overnight courier to Siemens for analysis of DRO, GRO, PVOCs, and PAHs.

Page 4 of Table 4 summarizes the laboratory analytical results, as well as the field-screening PID values, for the September 2009 soil samples. Parameters that attained or exceeded current NR 720 standards at one or more sample locations include benzene, toluene, ethylbenzene, xylenes, trimethylbenzenes (TMBs, combined), benzo(a)pyrene, benzo(b)fluoranthene, and chrysene.

May 2010 Soil Sampling and Results

On May 12, 2010, Gannett Fleming field staff collected four soil samples (N-25, N-35, S-25, and W-35) approximately 25 and 35 feet beyond the perimeter of the July 2007 excavation, as shown on Figure 3. A shovel was used to collect each soil sample at approximately 1 foot bgs. Each sample was placed in laboratory-supplied containers and shipped via overnight courier to Siemens for analysis of DRO, GRO, PVOCs, and PAHs.

Page 5 of Table 4 summarizes the laboratory analytical results for the May 2010 soil samples. Parameters that attained or exceeded current NR 720 standards at one or more sample locations include benzene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene.

Findings

July 2014 soil standards for several of the PVOCs and all PAHs are lower than they were in September 2005 (a comparison of the NR 720 standards is presented in Tables 1 and 4). Based on the results of the unsaturated soil samples collected on site within 4 feet of the ground surface (direct contact zone) in May 2005, July/September 2007, September 2009, and May 2010:

- Detected parameters that attained or exceeded current NR 720 standards for direct contact include:
  - Benzo(a)anthracene in GP-5, GP-7, and S-25.
  - Benzo(a)pyrene in all locations except GP-1 through GP-3, GP-6, S-1, and W-15.
  - Benzo(b)fluoranthene in GP-5 and GP-7.

- Detected parameters that attained or exceeded current NR 720 standards for the soil to groundwater pathway include:
  - Benzene in GP-1, E, N, S, W, E-1, N-1, S-1, W-1, E-15, S-15, W-15, and S-25.
  - Toluene in E, S, W, E-1, W-1, and S-15.
  - Ethylbenzene, xylenes, and TMBs (combined) in S-15.
  - Benzo(a)pyrene in GP-4, GP-5, GP-7, N, W, W-1, N-15, and S-25.
  - Benzo(b)fluoranthene in GP-4, GP-5, GP-7, N, W, E-1, S-1, W-1, E-15, N-15, S-15, and S-25.
  - Chrysene in all sample locations except GP-1 through GP-3, GP-6, and N-35.
  - Naphthalene in GP-7 and W-1.
  - Lead in E, N, S, and W.

Conclusion

The sand-sized coal fragments observed in GP-2 and GP-3, as summarized in Table 3, and the wide-spread prevalence of select "signature" PVOC and PAH parameters [e.g., benzene, benzo(a)pyrene, and chrysene] in the soil samples suggest it is very likely that industrial fill (placed when the ship loading slip was constructed) was used to backfill this site. In addition, there is only one sample location (S-15) that had the full suite of elevated PVOCs, excluding methyl tert butyl ether. Since we believe the remaining impacted soil at this site is associated

with historical filling activities and not from the two USTs and one AST formerly located there, we would like an opportunity to discuss this site in more detail with you. Please contact me if you have any comments, questions, or need additional information. We look forward to working toward a regulatory resolution for this site.

Sincerely,

GANNETT FLEMING, INC.

Clifford C. Wright, P.E., P.G.
Project Engineer

CCW/jec
Enc.

Electronic cc: Peter Fredman (Calumet)

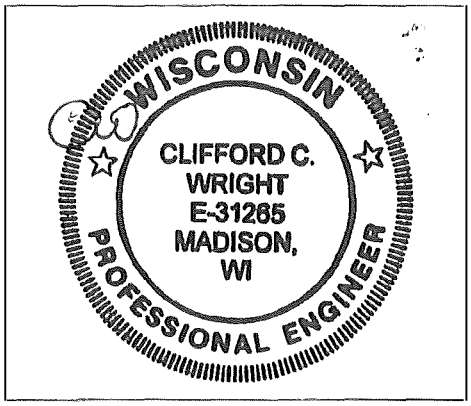
CERTIFICATION

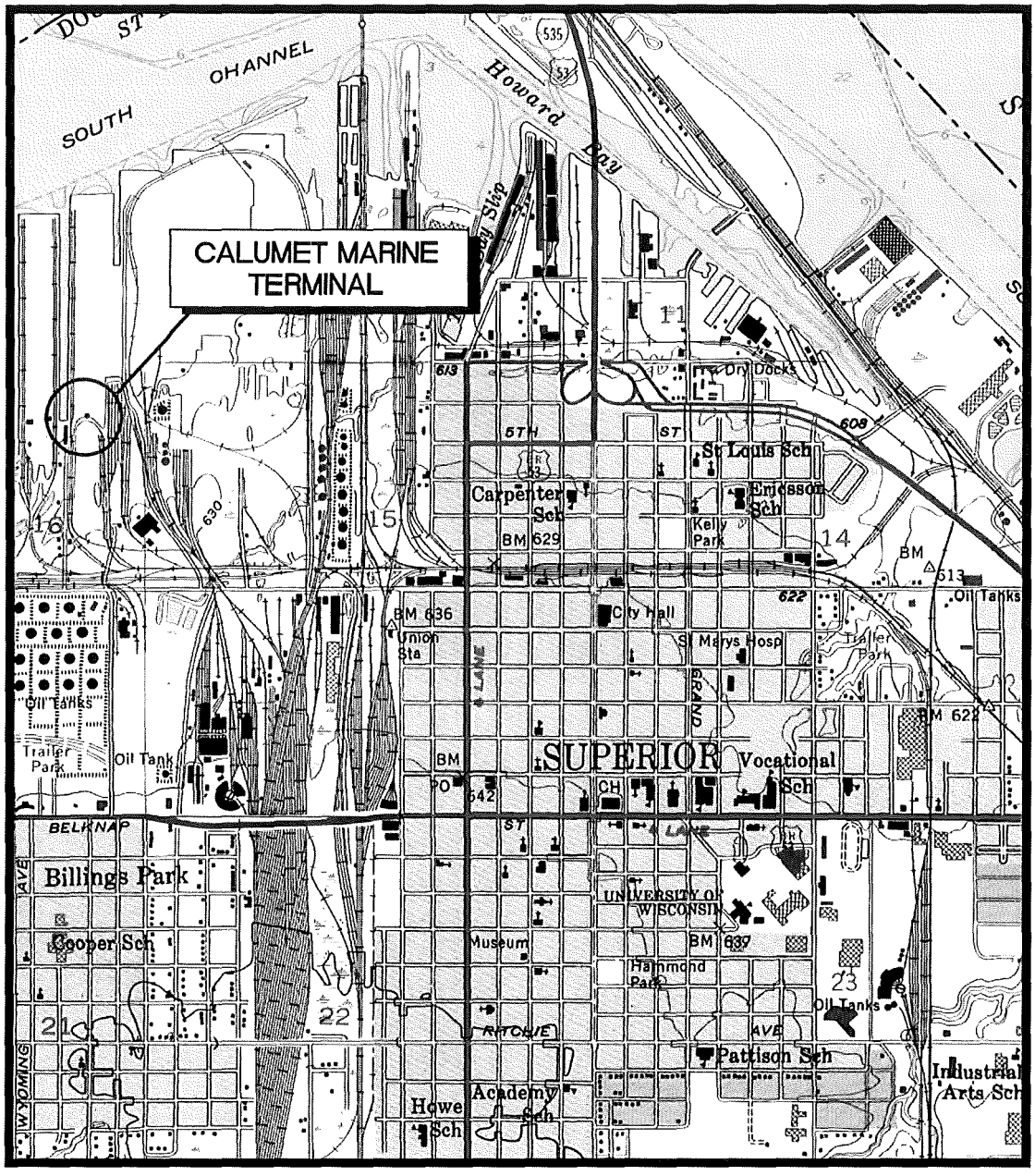
Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form for sites with any ongoing active remediation, monitoring, or an investigation. Other persons may sign this form for sites with no response activities during the six month reporting period.

I hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print Name	Title
Clifford C. Wright	Project Engineer
Signature	Date
Clifford C. Wright	8/13/2014

Professional Seal, if applicable:





SCALE: 1 INCH = 2000 FEET
CONTOUR INTERVAL = 10 FEET

7.5 MIN TOPOGRAPHIC MAP
SUPERIOR, WISCONSIN
1954
PHOTOREVISED 1983

LOCATION MAP

CALUMET MARINE TERMINAL
CALUMET SUPERIOR, LLC
SUPERIOR, WISCONSIN

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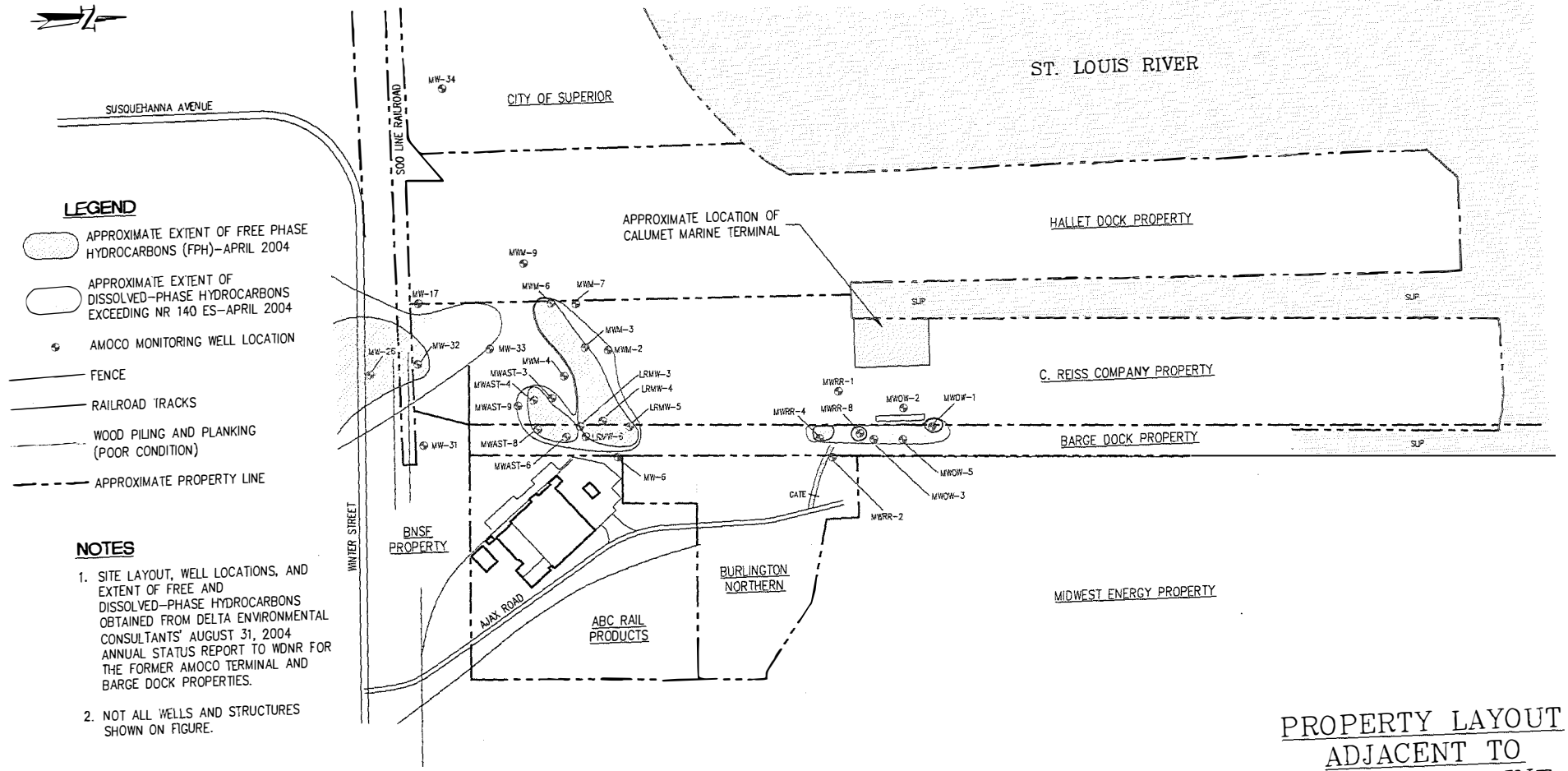

LEGEND

- APPROXIMATE EXTENT OF FREE PHASE HYDROCARBONS (FPH)–APRIL 2004
- APPROXIMATE EXTENT OF DISSOLVED–PHASE HYDROCARBONS EXCEEDING NR 140 ES–APRIL 2004
- AMOCO MONITORING WELL LOCATION
- FENCE
- RAILROAD TRACKS
- WOOD PILING AND PLANKING (POOR CONDITION)
- APPROXIMATE PROPERTY LINE

NOTES

1. SITE LAYOUT, WELL LOCATIONS, AND EXTENT OF FREE AND DISSOLVED–PHASE HYDROCARBONS OBTAINED FROM DELTA ENVIRONMENTAL CONSULTANTS' AUGUST 31, 2004 ANNUAL STATUS REPORT TO WDNR FOR THE FORMER AMOCO TERMINAL AND BARGE DOCK PROPERTIES.
2. NOT ALL WELLS AND STRUCTURES SHOWN ON FIGURE.

0 400
Approximate Scale In Feet

070314
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PROPERTY LAYOUT ADJACENT TO CALUMET MARINE TERMINAL SITE

CALUMET MARINE TERMINAL
CALUMET SUPERIOR, LLC
SUPERIOR, WISCONSIN

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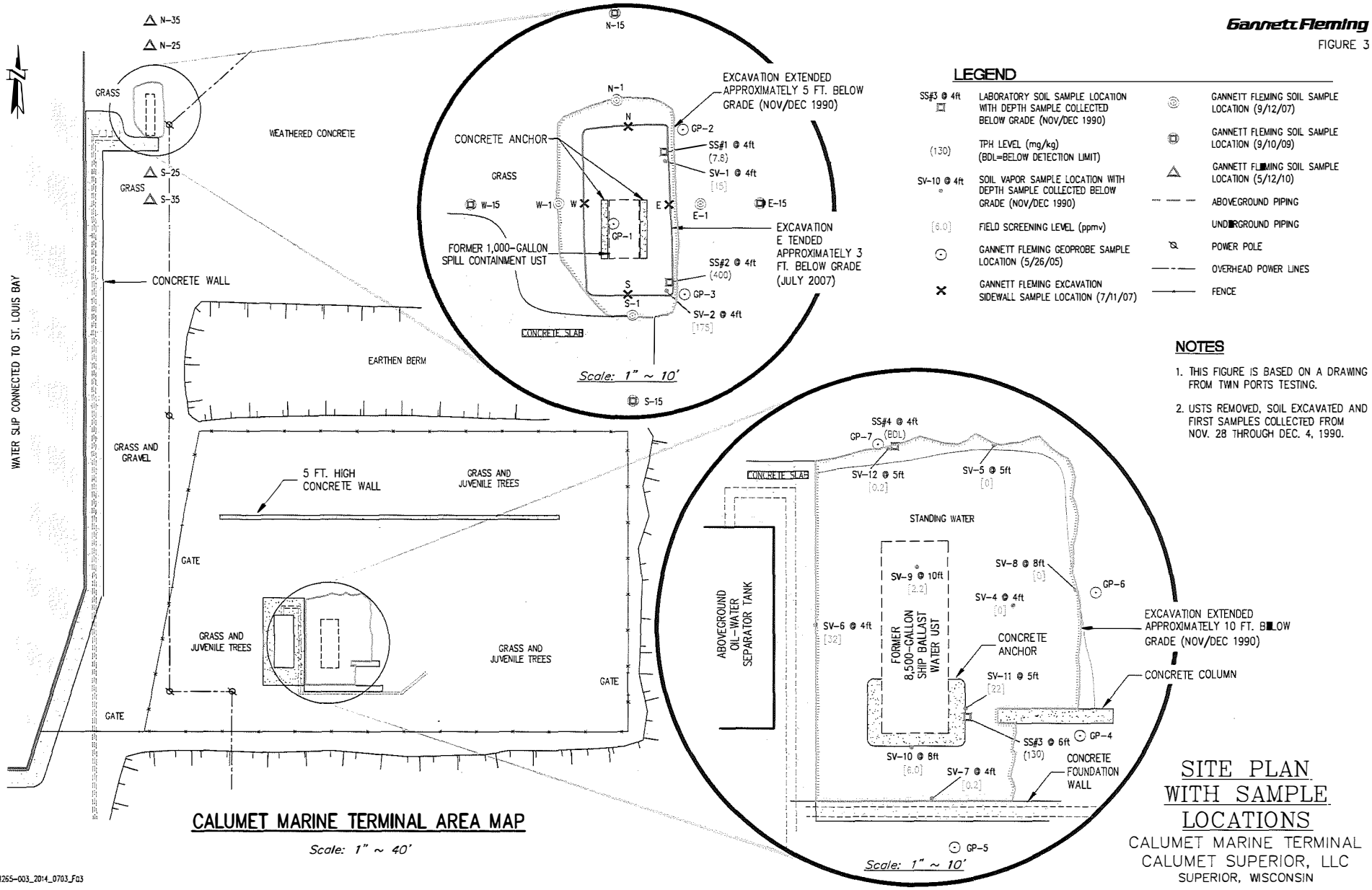
FIGURE 3



LEGEND

SS#3 @ 4ft	LABORATORY SOIL SAMPLE LOCATION WITH DEPTH SAMPLE COLLECTED BELOW GRADE (NOV/DEC 1990)
(130)	TPH LEVEL (mg/kg) (BDL=BELOW DETECTION LIMIT)
SV-10 @ 4ft	SOIL VAPOR SAMPLE LOCATION WITH DEPTH SAMPLE COLLECTED BELOW GRADE (NOV/DEC 1990)
[6.0]	FIELD SCREENING LEVEL (ppmv)
	GANNETT FLEMING GEOPROBE SAMPLE LOCATION (5/26/05)
	GANNETT FLEMING EXCAVATION SIDEWALL SAMPLE LOCATION (7/11/07)
	GANNETT FLEMING SOIL SAMPLE LOCATION (9/12/07)
	GANNETT FLEMING SOIL SAMPLE LOCATION (9/10/09)
	GANNETT FLEMING SOIL SAMPLE LOCATION (5/12/10)
	ABOVEGROUND PIPING
	UNDERGROUND PIPING
	POWER POLE
	OVERHEAD POWER LINES
	FENCE

NOTES

1. THIS FIGURE IS BASED ON A DRAWING FROM TWIN PORTS TESTING.
2. USTS REMOVED, SOIL EXCAVATED AND FIRST SAMPLES COLLECTED FROM NOV. 28 THROUGH DEC. 4, 1990.

CALUMET MARINE TERMINAL AREA MAP

Scale: 1" ~ 40'

SITE PLAN WITH SAMPLE LOCATIONS

CALUMET MARINE TERMINAL
CALUMET SUPERIOR, LLC
SUPERIOR, WISCONSIN

071414
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CALUMET SUPERIOR, LLC
SUPERIOR, WISCONSIN

TABLE 1[1]

SOIL ANALYTICAL RESULTS FOR SAMPLES COLLECTED DURING MAY 2005 SITE INVESTIGATION (MARINE TERMINAL SITE)

Parameter	Sample ID, Depth (ft), and Date Collected							NR 720 RCL	NR 746 Table 1 Free Product Indicator Concentration	NR 746 Table 2 Direct Contact Concentration
	GP-1 0-2 05/26/05	GP-2 2-3 05/26/05	GP-3 2-3 05/26/05	GP-4 0-2 05/26/05	GP-5 0-2 05/26/05	GP-6 0-2 05/26/05	GP-7 0-2 05/26/05			
Lead	14.3	3.57	2.04	8.54	11.5	6.65	10.50	500[2]	NS	NS
Diesel range organics	**467**	<5.97	<5.85	97.7	43.8	<6.67	15.1	250	NS	NS
Gasoline range organics	8.22	<5.97	5.85	<5.71	<5.90	<6.67	<6.46	250	NS	NS
Benzene	**0.35**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0055	8.5	1.1
Toluene	0.886	<0.025	<0.025	<0.025	0.0408	<0.025	<0.025	1.5	38	38
Ethylbenzene	0.268	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	2.9	4.6	4.6
Xylenes	1.444	<0.050	<0.050	<0.0568	0.0896	<0.050	<0.050	4.1	42	42
1,2,4-Trimethylbenzene	0.439	<0.025	<0.025	<0.025	0.0325	<0.025	<0.025	NS	83	83
1,3,5-Trimethylbenzene	0.16	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	NS	11	11
Methyl tert butyl ether	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	NS	NS	NS
Polycyclic Aromatic Hydrocarbons (PAHs)										
1-Methylnaphthalene	0.203	<0.00418	<0.00409	<0.08	<0.0413	<0.00467	<0.904	NS	NS	NS
2-Methylnaphthalene	0.305	<0.0049	<0.0048	<0.0937	<0.0483	<0.00547	<1.06	NS	NS	NS
Acenaphthalene	<0.0541	<0.00562	<0.0055	0.559	<0.0554	<0.00627	11	NS	NS	NS
Acenaphthylene	<0.0759	<0.00789	<0.00772	<0.151	<0.0778	<0.0088	<1.71	NS	NS	NS
Anthracene	<0.0242	<0.00251	<0.00246	1.23	1.71	<0.0028	29.3	NS	NS	NS
Benzo(a)anthracene	0.108	<0.0049	<0.0048	1.36	2.64	<0.00547	16.5	NS	NS	NS
Benzo(a)pyrene	0.137	<0.00275	<0.00269	0.863	1.86	0.00579 J	7.24	NS	NS	NS
Benzo(b)fluoranthene	0.227	<0.00251	<0.00246	0.971	2.42	0.00345 J	8.88	NS	NS	NS
Benzo(ghi)perylene	0.234	<0.00251	<0.00246	0.773	1.54	0.0232	3.53	NS	NS	NS
Benzo(k)fluoranthene	0.0792	<0.00346	<0.00339	0.473	1.02	<0.00387	3.42	NS	NS	NS
Chrysene	0.106	<0.00275	<0.00269	1.04	2.03	0.00399 J	10.7	NS	NS	NS
Dibenzo(a,h)anthracene	<0.0161	<0.00167	<0.00164	<0.032	<0.0165	<0.00187	<0.362	NS	NS	NS
Fluoranthene	0.856	0.0106	<0.00257	6.07	9.98	0.0066	84.1	NS	NS	NS
Fluorene	<0.023	<0.00239	<0.00234	0.578	<0.0236	<0.00267	12.9	NS	NS	NS
Indeno(1,2,3-cd)pyrene	0.15	<0.00191	<0.00187	0.434	1.25	0.0074	2.65	NS	NS	NS
Naphthalene	0.386	<0.00191	<0.00187	<0.0366	<0.0189	<0.00213	*3.98*	NS	2,700	2,700
Phenanthrene	0.482	0.0062 J	<0.00269	4.59	5.64	0.004 J	74.5	NS	NS	NS
Pyrene	<0.0242	<0.00251	<0.00246	5.13	4.09	0.00625 J	77.0	NS	NS	NS

NOTES:

Results are in milligrams per kilogram (mg/kg) on a dry weight basis; concentrations exceeding an applicable NR 720 residual contaminant level (RCL) are bold.

J = Estimated concentration between laboratory's level of detection and level of quantitation.

NS = No standard [as of September 2005].

FOOTNOTES:

(1) Reproduced from Table 3 of Gannett Fleming's September 22, 2005, *Results of Site Investigation and Request for Site Closure* report to Commerce.

(2) NR 720 Table 2 industrial direct contact Residual Contaminant Level (non-industrial direct contact standard is 50 mg/kg).

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CALUMET SUPERIOR, LLC
SUPERIOR, WISCONSIN

TABLE 2[1]

GROUNDWATER ANALYTICAL RESULTS FOR SAMPLES COLLECTED DURING MAY 2005 SITE INVESTIGATION AT THE MARINE TERMINAL SITE

Parameter	Sample ID and Date Collected GP-1 05/26/05	GP-4 05/26/05	NR 140 PAL	NR 140 ES
Gasoline range organics	<50.0	<50.0	NS	NS
Benzene	<0.31	<0.31	0.5	5
Toluene	<0.3	<0.3	200	1000
Ethylbenzene	<0.5	<0.5	140	700
Xylenes	<0.92	<0.92	1,000	10,000
Trimethylbenzenes	<0.4	<0.4	96	480
Methyl tert butyl ether	<0.3	<0.3	12	60
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthalene	<0.06	na	NS	NS
Acenaphthylene	<0.06	na	NS	NS
Anthracene	<0.05	na	600	3,000
Benzo(a)anthracene	<0.04	na	NS	NS
Benzo(a)pyrene	<0.017	na	0.02	0.2
Benzo(b)fluoranthene	<0.02	na	0.02	0.2
Benzo(k)fluoranthene	<0.04	na	NS	NS
Benzo(ghi)perylene	<0.05	na	NS	NS
Chrysene	<0.02	na	0.02	0.2
Dibenzo(a,h)anthracene	<0.06	na	NS	NS
Fluoranthene	<0.06	na	80	400
Fluorene	<0.12	na	80	400
Indeno(1,2,3-cd)pyrene	<0.05	na	NS	NS
1-Methylnaphthalene	<0.08	na	NS	NS
2-Methylnaphthalene	<0.11	na	NS	NS
Naphthalene	<0.1	<0.8	8	40
Phenanthrene	<0.08	na	NS	NS
Pyrene	<0.09	na	50	250

NOTE:
Results are in micrograms per liter (µg/ℓ) [and NR 140 standards shown are from September 2005].
na = Not analyzed.
NS = No standard [as of September 2005].

FOOTNOTE:
(1) Reproduced from Table 4 of Gannett Fleming's September 22, 2005, *Results of Site Investigation and Request for Site Closure* report to Commerce.

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CALUMET SUPERIOR, LLC
SUPERIOR, WISCONSIN

TABLE 3

SUMMARY OF MAY 2005 GEOPROBE BORING LOGS

Boring ID	Sample Number	Interval (ft bgs)	Recovery (inch)	Depth (ft bgs)	General Soil Description	Graphic Log	Saturated/ Unsaturated	Interval Excavated?	Lab Data, Too?
GP-1	1	0-4	36	0-0.1	Black topsoil and grass	—	Unsat.	Yes	No
				0.1-4.0	Brown-black silty sand FILL with little gravel, wet at 2'	xxx	Unsat. to Sat.	To ~3 ft	Yes at 0-2 ft bgs
	2	4-8	24	4.0-8.0	Same as above	xxx	Saturated	No	No
GP-2	1	0-4	36	0-0.1	Black topsoil and grass	---	Unsat.	No	No
				0.1-2.0	Black sand-sized coal fragments, FILL	xxx	Unsat.	No	No
				2.0-4.0	Brown fine to medium sand FILL, wet at 3'	xxx	Unsat. to Sat.	No	Yes at 2-3 ft bgs
GP-3	1	0-4	36	0-0.1	Black topsoil and grass	---	Unsat.	No	No
				0.1-2.0	Black sand-sized coal fragments, FILL	xxx	Unsat.	No	No
				2.0-4.0	Brown fine to medium sand, FILL, wet at 3'	xxx	Unsat. to Sat.	No	Yes at 2-3 ft bgs
GP-4	1	0-4	18	0-4.0	Blk-brwn silty sd. w/ some clay & gravel FILL, wet at 1.5'	xxx	Unsat. to Sat.	Yes	Yes at 0-2 ft bgs
	2	4-8	0	4.0-8.0	No recovery		Saturated	No	No
GP-5	1	0.4	24	0-4.0	Blk-brwn silty sd. w/ little clay, gravel, & brick fragments FILL, wet at 2'	xxx	Unsat. to Sat.	No	Yes at 0-2 ft bgs
GP-6	1	0-4	40	0-0.5	Red-brown gravel and clay FILL	xxx	Unsat.	No	No
				0.5-4.0	Red-brown CLAY, moist to wet	////////	Unsat. to Sat.	No	Yes at 0-2 ft bgs
GP-7	1	0-4	36	0-0.5	Red-brown gravel and clay FILL	xxx	Unsat.	No	No
				0.5-4.0	Red-brown CLAY, moist to wet	////////	Unsat. to Sat.	No	Yes at 0-2 ft bgs

NOTES:
Interval and Depth = Interval and sample depths in feet below ground surface (ft bgs).
Sat. = Saturated
Unsat. = Unsaturated
— = Topsoil
xxx = Fill
//// = Clay

CALUMET SUPERIOR, LLC
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TABLE 4

SOIL ANALYTICAL RESULTS FOR CALUMET MARINE TERMINAL SITE (MAY 2005 THROUGH MAY 2010)

Parameter	Sample ID, Sample Depth in feet below ground surface (ft bgs), etc.							NR 720	NR 720
Sample ID	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-7	Soil to	Industrial
Sample Depth (ft bgs)	0-2	2-3	2-3	0-2	0-2	0-2	0-2	Groundwater	Direct
Depth to Water (ft bgs)	3	3	3	3	3	3	3	Pathway	Contact
Sample Date	05/26/05	05/26/05	05/26/05	05/26/05	05/26/05	05/26/05	05/26/05	Standard	Standard
Lead	14.3	3.57	2.04	8.54	11.5	6.65	10.50	27	800
Diesel range organics	467	<5.97	<5.85	97.7	43.8	<6.67	15.1	NS	NS
Gasoline range organics	8.22	<5.97	5.85	<5.71	<5.90	<6.67	<6.46	NS	NS
Petroleum Volatile Organic Compounds (PVOCs)									
Benzene	*0.352*	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.025*	0.00512	7.41
Toluene	0.886	<0.025	<0.025	<0.025	0.0408	<0.025	<0.025	1.1072	818
Ethylbenzene	0.268	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	1.57	37
Xylenes	1.444	<0.050	<0.050	<0.0568	0.0896	<0.050	<0.050	3.94	258
1,2,4-TMB	0.439	<0.025	<0.025	<0.025	0.0325	<0.025	<0.025	NS	219
1,3,5-TMB	0.16	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	NS	182
TMBs (combined)	0.599	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.382069	NS
Methyl tert butyl ether	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.027021	293
Polycyclic Aromatic Hydrocarbons (PAHs)									
1-Methylnaphthalene	0.203	<0.00418	<0.00409	<0.08	<0.0413	<0.00467	<0.904	NS	53.1
2-Methylnaphthalene	0.305	<0.0049	<0.0048	<0.0937	<0.0483	<0.00547	<1.06	NS	2,200
Acenaphthene	<0.0541	<0.00562	<0.0055	0.559	<0.0554	<0.00627	11	NS	33,000
Acenaphthylene	<0.0759	<0.00789	<0.00772	<0.151	<0.0778	<0.0088	<1.71	NS	NS
Anthracene	<0.0242	<0.00251	<0.00246	1.23	1.71	<0.0028	29.3	197.7273	100,000
Benzo(a)anthracene	0.108	<0.0049	<0.0048	1.36	***2.64***	<0.00547	***16.5***	NS	2.11
Benzo(a)pyrene	0.137	<0.00275	<0.00269	***0.863***	***1.86***	0.00579 J	***7.24***	0.47	0.211
Benzo(b)fluoranthene	0.227	<0.00251	<0.00246	*0.971*	***2.42***	0.00345 J	***8.88***	0.4793	2.11
Benzo(ghi)perylene	0.234	<0.00251	<0.00246	0.773	1.54	0.0232	3.53	NS	NS
Benzo(k)fluoranthene	0.0792	<0.00346	<0.00339	0.473	1.02	<0.00387	3.42	NS	21.1
Chrysene	0.106	<0.00275	<0.00269	*1.04*	*2.03*	0.00399 J	*10.7*	0.144606	211
Dibenzo(a,h)anthracene	<0.0161	<0.00167	<0.00164	<0.032	<0.0165	<0.00187	<0.362	NS	0.211
Fluoranthene	0.856	0.0106	<0.00257	6.07	9.98	0.0066	84.1	88.87781	22,000
Fluorene	<0.023	<0.00239	<0.00234	0.578	<0.0236	<0.00267	12.9	14.80272	22,000
Indeno(1,2,3-cd)pyrene	0.15	<0.00191	<0.00187	0.434	1.25	0.0074	2.65	NS	2.11
Naphthalene	0.386	<0.00191	<0.00187	<0.0366	<0.0189	<0.00213	*3.98*	0.658182	26
Phenanthrene	0.482	0.0062 J	<0.00269	4.59	5.64	0.004 J	74.5	NS	NS
Pyrene	<0.0242	<0.00251	<0.00246	5.13	4.09	0.00625 J	*77.0*	54.13223	16,500

NOTES:
Results are in milligrams per kilogram (mg/kg) on a dry weight basis.
Results underlined and italicized exceed applicable NR 720 soil to groundwater pathway standard (for unsaturated samples only).
Results in bold exceed applicable NR 720 industrial direct contact standard (for samples within 4 ft of ground surface only).
J = Estimated concentration between laboratory's level of detection and level of quantitation.
NS = No standard.
TMB = Trimethylbenzene.
TMBs (combined) = Trimethylbenzenes (1,2,4- and 1,3,5- combined).

TABLE 4

SOIL ANALYTICAL RESULTS FOR CALUMET MARINE TERMINAL SITE (MAY 2005 THROUGH MAY 2010)

Parameter	Sample ID, Sample Depth in feet below ground surface (ft bgs), etc.				NR 720	NR 720
Sample ID	E	N	S	W	Soil to	Industrial
Sample Depth (ft bgs)	2.5	2.5	2.5	2.5	Groundwater	Direct
Depth to Water (ft bgs)	3	3	3	3	Pathway	Contact
Sample Date	07/11/07	07/11/07	07/11/07	07/11/07	Standard	Standard
PID (ppmv)	<0.1	<0.1	<0.1	<0.1	NS	NS
Lead	*48.8*	*109*	*125*	*48.4*	27	800
Diesel range organics	838	414	184	137	NS	NS
Gasoline range organics	20.7	19.9	17.3	21.7	NS	NS
Petroleum Volatile Organic Compounds (PVOCs)						
Benzene	*0.280*	*0.151*	*0.313*	*0.603*	0.00512	7.41
Toluene	*1.18*	1.01	*1.39*	*1.44*	1.1072	818
Ethylbenzene	0.704	0.320	0.534	0.604	1.57	37
Xylenes	2.475	1.872	2.193	2.383	3.94	258
1,2,4-TMB	0.803	0.577	0.695	0.807	NS	219
1,3,5-TMB	0.431	0.171	0.349	0.338	NS	182
TMBs (combined)	1.234	0.748	1.044	1.145	1.382069	NS
Methyl tert butyl ether	<0.011	<0.011	<0.011	<0.011	0.027021	293
Polycyclic Aromatic Hydrocarbons (PAHs)						
1-Methylnaphthalene	0.131	<0.0790	0.230	0.203	NS	53.1
2-Methylnaphthalene	0.334	0.399	0.644	0.515	NS	2,200
Acenaphthene	<0.0258	0.284 J	<0.0279	<0.0250	NS	33,000
Acenaphthylene	<0.0362	<0.141	<0.0391	<0.0351	NS	NS
Anthracene	<0.0175	0.699	<0.0190	0.146	197.7273	100,000
Benzo(a)anthracene	0.106	0.791	0.0836	0.257	NS	2.11
Benzo(a)pyrene	**0.275**	***1.15***	**0.329**	***0.912***	0.47	0.211
Benzo(b)fluoranthene	0.217	*0.791*	0.273	*0.653*	0.4793	2.11
Benzo(ghi)perylene	0.232	0.737	0.334	0.570	NS	NS
Benzo(k)fluoranthene	0.0798	0.419	0.0884	0.334	NS	21.1
Chrysene	*0.279*	*1.18*	*0.308*	*0.655*	0.144606	211
Dibenzo(a,h)anthracene	<0.0148	<0.0576	<0.0160	<0.0144	NS	0.211
Fluoranthene	0.469	2.92	<0.0154	0.720	88.87781	22,000
Fluorene	0.0660	0.350	<0.0196	0.101	14.80272	22,000
Indeno(1,2,3-cd)pyrene	0.205	0.547	0.258	0.524	NS	2.11
Naphthalene	0.0884	0.294 J	0.174	0.170	0.658182	26
Phenanthrene	0.527	2.87	<0.0243	0.731	NS	NS
Pyrene	0.0228 J	0.372	<0.0167	0.0598	54.13223	16,500

NOTES:

Results in milligrams per kilogram (mg/kg) on a dry weight basis, except for PID readings which are in parts per million volume (ppmv).

Results underlined and italicized exceed applicable NR 720 soil to groundwater pathway standard (for unsaturated samples only).

Results in bold exceed applicable NR 720 industrial direct contact standard (for samples within 4 ft of ground surface only).

J = Estimated concentration between laboratory's level of detection and level of quantitation.

NS = No standard.

PID = Photo-ionization detector reading in parts per million, volume (ppmv).

TMB = Trimethylbenzene.

TMBs (combined) = Trimethylbenzenes (1,2,4- and 1,3,5- combined).

TABLE 4

SOIL ANALYTICAL RESULTS FOR CALUMET MARINE TERMINAL SITE (MAY 2005 THROUGH MAY 2010)

Parameter	Sample ID, Sample Depth in feet below ground surface (ft bgs), etc.				NR 720	NR 720
Sample ID	E-1	N-1	S-1	W-1	Soil to	Industrial
Sample Depth (ft bgs)	1	1	1	1	Groundwater	Direct
Depth to Water (ft bgs)	3	3	3	3	Pathway	Contact
Sample Date	09/12/07	09/12/07	09/12/07	09/12/07	Standard	Standard
PID (ppmv)	<0.1	<0.1	<0.1	<0.1	NS	NS
Diesel range organics	438	205	400	390	NS	NS
Gasoline range organics	20.7	9.98	9.39	15.0	NS	NS
Petroleum Volatile Organic Compounds (PVOCs)						
Benzene	*0.253*	*0.089*	*0.161*	*0.285*	0.00512	7.41
Toluene	*2.04*	0.514	0.643	*1.65*	1.1072	818
Ethylbenzene	0.567	0.181	0.228	0.315	1.57	37
Xylenes	3.237	1.202	1.186	2.053	3.94	258
1,2,4-TMB	0.814	0.398	0.409	0.630	NS	219
1,3,5-TMB	0.378	0.124	0.187	0.305	NS	182
TMBs (combined)	1.192	0.522	0.596	0.935	1.382069	NS
Methyl tert butyl ether	<0.012	<0.012	<0.011	<0.011	0.027021	293
Polycyclic Aromatic Hydrocarbons (PAHs)						
1-Methylnaphthalene	0.438	<0.198	<0.810	<0.406	NS	53.1
2-Methylnaphthalene	1.40	<0.219	<0.897	1.06 J	NS	2,200
Acenaphthene	<0.0514	<0.252	<1.03	<0.515	NS	33,000
Acenaphthylene	<0.0721	<0.353	<1.44	<0.724	NS	NS
Anthracene	<0.0350	0.354 J	1.85 J	0.948 J	197.7273	100,000
Benzo(a)anthracene	<0.0448	0.411 J	1.80 J	0.699 J	NS	2.11
Benzo(a)pyrene	**0.373**	**0.407 J**	*<0.503*	***0.732 J***	0.47	0.211
Benzo(b)fluoranthene	*0.520*	0.442	*1.39 J*	*0.844*	0.4793	2.11
Benzo(ghi)perylene	0.545	0.297 J	<0.875	<0.439	NS	NS
Benzo(k)fluoranthene	0.143	0.171 J	<0.635	<0.318	NS	21.1
Chrysene	*0.453*	*0.712*	*2.78*	*1.35*	0.144606	211
Dibenzo(a,h)anthracene	<0.0295	<0.145	***<0.591***	***<0.296***	NS	0.211
Fluoranthene	<0.0284	1.49	6.87	3.13	88.87781	22,000
Fluorene	<0.0361	<0.177	0.979 J	0.607 J	14.80272	22,000
Indeno(1,2,3-cd)pyrene	0.748	0.340 J	0.726 J	0.586 J	NS	2.11
Naphthalene	0.284	<0.246	<1.01	*0.697 J*	0.658182	26
Phenanthrene	<0.0448	1.35	6.48	3.40	NS	NS
Pyrene	<0.0308	0.223 J	1.09 J	0.404 J	54.13223	16,500

NOTES:

Results in milligrams per kilogram (mg/kg) on a dry weight basis, except for PID readings which are in parts per million volume (ppmv).

Results underlined and italicized exceed applicable NR 720 soil to groundwater pathway standard (for unsaturated samples only).

Results in bold exceed applicable NR 720 industrial direct contact standard (for samples within 4 ft of ground surface only).

J = Estimated concentration between laboratory's level of detection and level of quantitation.

NS = No standard.

PID = Photo-ionization detector reading in parts per million, volume (ppmv).

TMB = Trimethylbenzene.

TMBs (combined) = Trimethylbenzenes (1,2,4- and 1,3,5- combined).

TABLE 4

SOIL ANALYTICAL RESULTS FOR CALUMET MARINE TERMINAL SITE (MAY 2005 THROUGH MAY 2010)

Parameter	Sample ID, Sample Depth in feet below ground surface (ft bgs), etc.				NR 720 Soil to Groundwater Pathway Standard	NR 720 Industrial Direct Contact Standard
Sample ID	E-15	N-15	S-15	W-15		
Sample Depth (ft bgs)	0.7	0.5	1	1		
Depth to Water (ft bgs)	3	3	3	3		
Sample Date	09/10/09	09/10/09	09/10/09	09/10/09		
PID (ppmv)	0	0	0	0	NS	NS
Diesel range organics	401	44.3	445	389	NS	NS
Gasoline range organics	<5.20	<5.00	33.5	24.9	NS	NS
Petroleum Volatile Organic Compounds (PVOCs)						
Benzene	*0.124*	*<0.016*	*0.475*	*0.154*	0.00512	7.41
Toluene	0.365	0.052	*2.68*	0.817	1.1072	818
Ethylbenzene	0.098	0.051	*2.19*	0.523	1.57	37
Xylenes	0.466	0.127	*5.08*	2.52	3.94	258
1,2,4-TMB	0.118	0.039	1.32	1.01	NS	219
1,3,5-TMB	0.062	<0.018	0.481	0.329	NS	182
TMBs (combined)	0.180	<0.057	*1.801*	1.339	1.382069	NS
Methyl tert butyl ether	<0.011	<0.011	<0.013	<0.012	0.027021	293
Polycyclic Aromatic Hydrocarbons (PAHs)						
1-Methylnaphthalene	<0.0831	<0.0807	0.446	0.208	NS	53.1
2-Methylnaphthalene	<0.0920	<0.0894	0.806	0.325	NS	2,200
Acenaphthene	<0.105	<0.103	<0.106	<0.0275	NS	33,000
Acenaphthylene	<0.148	<0.144	<0.149	<0.0386	NS	NS
Anthracene	<0.0718	0.286	<0.0722	<0.0187	197.7273	100,000
Benzo(a)anthracene	0.776	0.598	0.427	0.137	NS	2.11
Benzo(a)pyrene	**0.442**	***0.545***	**0.346**	0.150	0.47	0.211
Benzo(b)fluoranthene	*0.526*	*0.608*	*0.521*	0.233	0.4793	2.11
Benzo(ghi)perylene	0.389	0.395	0.355	0.167	NS	NS
Benzo(k)fluoranthene	0.291	0.295	0.234	0.149	NS	21.1
Chrysene	*0.971*	*0.732*	*0.735*	*0.363*	0.144606	211
Dibenzo(a,h)anthracene	<0.0606	<0.0589	<0.0609	<0.0158	NS	0.211
Fluoranthene	2.46	1.52	1.35	0.467	88.87781	22,000
Fluorene	0.250	<0.0720	<0.0744	<0.0193	14.80272	22,000
Indeno(1,2,3-cd)pyrene	0.308	0.486	0.402	0.177	NS	2.11
Naphthalene	<0.103	<0.100	0.256 J	0.176	0.658182	26
Phenanthrene	2.54	0.825	<0.0924	0.378	NS	NS
Pyrene	1.54	1.32	0.500	0.145	54.13223	16,500

NOTES:

Results in milligrams per kilogram (mg/kg) on a dry weight basis, except for PID readings which are in parts per million volume (ppmv).

Results underlined and italicized exceed applicable NR 720 soil to groundwater pathway standard (for unsaturated samples only).

Results in bold exceed applicable NR 720 industrial direct contact standard (for samples within 4 ft of ground surface only).

J = Estimated concentration between laboratory's level of detection and level of quantitation.

NS = No standard.

PID = Photo-ionization detector reading in parts per million, volume (ppmv).

TMB = Trimethylbenzene.

TMBs (combined) = Trimethylbenzenes (1,2,4- and 1,3,5- combined).

TABLE 4

SOIL ANALYTICAL RESULTS FOR CALUMET MARINE TERMINAL SITE (MAY 2005 THROUGH MAY 2010)

Parameter	Sample ID, Sample Depth in feet below ground surface (ft bgs), etc.				NR 720	NR 720
Sample ID	N-25	N-35	S-25	S-35	Soil to	Industrial
Sample Depth (ft bgs)	0-1	0-1	0-1	0-1	Groundwater	Direct
Depth to Water (ft bgs)	3	3	3	3	Pathway	Contact
Sample Date	05/12/10	05/12/10	05/12/10	05/12/10	Standard	Standard
Diesel range organics	7.25	29.4	208	21.2	NS	NS
Gasoline range organics	<5.00	<5.00	<5.00	<5.00	NS	NS
Petroleum Volatile Organic Compounds (PVOCs)						
Benzene	*<0.016*	*<0.016*	*0.063*	*<0.016*	0.00512	7.41
Toluene	0.077	0.193	0.215	0.100	1.1072	818
Ethylbenzene	<0.018	0.107	0.087	0.054	1.57	37
Xylenes	0.137	0.433	0.432	0.253	3.94	258
1,2,4-TMB	<0.013	0.164	0.113	0.079	NS	219
1,3,5-TMB	<0.018	0.081	0.066	0.056	NS	182
TMBs (combined)	<0.031	0.245	0.179	0.135	1.382069	NS
Methyl tert butyl ether	<0.011	<0.011	<0.011	<0.011	0.027021	293
Polycyclic Aromatic Hydrocarbons (PAHs)						
1-Methylnaphthalene	<0.0409	<0.0431	<0.431	<0.0415	NS	53.1
2-Methylnaphthalene	<0.0454	<0.0478	<0.478	<0.0460	NS	2,200
Acenaphthene	<0.0520	<0.0548	0.738 J	<0.0527	NS	33,000
Acenaphthylene	<0.0730	<0.0769	<0.769	<0.0741	NS	NS
Anthracene	<0.0354	<0.0373	2.57	<0.0359	197.7273	100,000
Benzo(a)anthracene	0.211	0.242	**2.61**	0.241	NS	2.11
Benzo(a)pyrene	**0.237**	**0.260**	***1.69***	**0.258**	0.47	0.211
Benzo(b)fluoranthene	0.243	0.292	*1.64*	0.311	0.4793	2.11
Benzo(ghi)perylene	0.173	0.234	0.736 J	0.155	NS	NS
Benzo(k)fluoranthene	0.117	0.155	0.991 J	0.164	NS	21.1
Chrysene	*0.262*	0.140	*1.89*	*0.170*	0.144606	211
Dibenzo(a,h)anthracene	<0.0299	<0.0315	<0.315	<0.0303	NS	0.211
Fluoranthene	0.451	0.484	7.06	0.589	88.87781	22,000
Fluorene	<0.0365	<0.0385	<0.385	<0.0370	14.80272	22,000
Indeno(1,2,3-cd)pyrene	0.215	0.279	0.822	0.0708 J	NS	2.11
Naphthalene	<0.0590	<0.0536	<0.536	<0.0516	0.658182	26
Phenanthrene	0.272	0.265	7.87	0.443	NS	NS
Pyrene	0.472	0.452	7.18	0.515	54.13223	16,500

NOTES:

Results in milligrams per kilogram (mg/kg) on a dry weight basis.

Results underlined and italicized exceed applicable NR 720 soil to groundwater pathway standard (for unsaturated samples only).

Results in bold exceed applicable NR 720 industrial direct contact standard (for samples within 4 ft of ground surface only).

J = Estimated concentration between laboratory's level of detection and level of quantitation.

NS = No standard.

TMB = Trimethylbenzene.

TMBs (combined) = Trimethylbenzenes (1,2,4- and 1,3,5- combined).

ATTACHMENT A

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS FOR SOIL SAMPLES COLLECTED IN JULY AND SEPTEMBER 2007, SEPTEMER 2009, AND MAY 2010

SIEMENS

RECEIVED
GANNETT FLEMING, INC.
MADISON, WI

JUL 27 2007
FILE NO. 34265.003
Marine Terminal

July 24, 2007

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

REPORT NO.: 0707156 **PROJECT NO.: 34265.003**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received July 13, 2007.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

James R. Salkowski

James Salkowski

Lab Director
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Approved by: ____________________

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

ACCREDITED IN ACCORDANCE WITH nelac

SIEMENS

SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
0707156-01	South 2.5	07/11/07 10:00	Soil
0707156-02	West 2.5	07/11/07 10:30	Soil
0707156-03	East 2.5	07/11/07 10:45	Soil
0707156-04	North 2.5	07/11/07 11:40	Soil

SIEMENS

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003
REPORT NO. : 0707156
DATE REC'D 07/13/07 14:47
REPORT DATE : 07/24/07 10:33
PREPARED BY : JRS

Sample ID: **South 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 10:00** Lab No. : **0707156-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 3050B								
ICP Solid Metal Prep	Completed	N/A			1		07/18/07	DJB
EPA 6010B - Total								
Total Lead	125	mg/kg dry	0.632	2.09	1		07/19/07	BMS
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.695	mg/kg dry	0.013	0.026	1.03		07/17/07	LMP
1,3,5-Trimethylbenzene	0.349	mg/kg dry	0.019	0.026	1.03		07/17/07	LMP
Benzene	0.313	mg/kg dry	0.017	0.026	1.03		07/17/07	LMP
Ethylbenzene	0.534	mg/kg dry	0.019	0.026	1.03		07/17/07	LMP
Gasoline Range Organics	17.3	mg/kg dry	5.17	5.17	1.03	G6, G2	07/17/07	LMP
m&p-Xylene	1.65	mg/kg dry	0.022	0.026	1.03		07/17/07	LMP
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.026	1.03		07/17/07	LMP
o-Xylene	0.543	mg/kg dry	0.017	0.026	1.03		07/17/07	LMP
Toluene	1.39	mg/kg dry	0.018	0.026	1.03		07/17/07	LMP
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: MLS*					*Date Prepared:*	*07/19/07*	
1-Methylnaphthalene	0.230	mg/kg dry	0.0219	0.0712	5		07/23/07	LMP
2-Methylnaphthalene	0.644	mg/kg dry	0.0243	0.0830	5		07/23/07	LMP
Acenaphthene	ND	mg/kg dry	0.0279	0.0949	5		07/23/07	LMP
Acenaphthylene	ND	mg/kg dry	0.0391	0.130	5		07/23/07	LMP
Anthracene	ND	mg/kg dry	0.0190	0.0635	5		07/23/07	LMP
Benzo(a)anthracene	0.0836	mg/kg dry	0.0243	0.0830	5		07/23/07	LMP
Benzo(a)pyrene	0.329	mg/kg dry	0.0136	0.0457	5		07/23/07	LMP
Benzo(b)fluoranthene	0.273	mg/kg dry	0.0125	0.0415	5		07/23/07	LMP
Benzo(g,h,i)perylene	0.334	mg/kg dry	0.0237	0.0771	5	CSH	07/23/07	LMP
Benzo(k)fluoranthene	0.0884	mg/kg dry	0.0172	0.0575	5		07/23/07	LMP
Chrysene	0.308	mg/kg dry	0.0136	0.0457	5		07/23/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0160	0.0534	5		07/23/07	LMP
Fluoranthene	ND	mg/kg dry	0.0154	0.0516	5		07/23/07	LMP
Fluorene	ND	mg/kg dry	0.0196	0.0652	5		07/23/07	LMP
Indeno(1,2,3-cd)pyrene	0.258	mg/kg dry	0.0130	0.0433	5		07/23/07	LMP
Naphthalene	0.174	mg/kg dry	0.0273	0.0890	5		07/23/07	LMP
Phenanthrene	ND	mg/kg dry	0.0243	0.0795	5		07/23/07	LMP
Pyrene	ND	mg/kg dry	0.0167	0.0557	5		07/23/07	LMP

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Sample ID: **South 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 10:00** Lab No. : **0707156-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
MOSA21-2								
Total Solids	84.3	% by Weight	0.03	0.03	1		07/17/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*07/18/07*	
Diesel Range Organics	184	mg/kg dry	44.4	44.4	8.88	D2A, D2B, D5	07/19/07	LMP

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REPORT DATE : 07/24/07 10:33
PREPARED BY : JRS

Sample ID: **West 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 10:30** Lab No. : **0707156-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 3050B								
ICP Solid Metal Prep	Completed	N/A			1		07/18/07	DJB
EPA 6010B - Total								
Total Lead	48.4	mg/kg dry	0.568	1.87	1		07/19/07	BMS
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.807	mg/kg dry	0.013	0.025	1		07/17/07	LMP
1,3,5-Trimethylbenzene	0.338	mg/kg dry	0.018	0.025	1		07/17/07	LMP
Benzene	0.603	mg/kg dry	0.016	0.025	1		07/17/07	LMP
Ethylbenzene	0.604	mg/kg dry	0.018	0.025	1		07/17/07	LMP
Gasoline Range Organics	21.7	mg/kg dry	5.00	5.00	1	G6, G2	07/17/07	LMP
m&p-Xylene	1.65	mg/kg dry	0.021	0.025	1		07/17/07	LMP
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		07/17/07	LMP
o-Xylene	0.733	mg/kg dry	0.016	0.025	1		07/17/07	LMP
Toluene	1.44	mg/kg dry	0.017	0.025	1		07/17/07	LMP
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: MLS*					*Date Prepared:*	*07/19/07*	
1-Methylnaphthalene	0.203	mg/kg dry	0.0197	0.0639	5		07/23/07	LMP
2-Methylnaphthalene	0.515	mg/kg dry	0.0218	0.0745	5		07/23/07	LMP
Acenaphthene	ND	mg/kg dry	0.0250	0.0852	5		07/23/07	LMP
Acenaphthylene	ND	mg/kg dry	0.0351	0.117	5		07/23/07	LMP
Anthracene	0.146	mg/kg dry	0.0170	0.0570	5		07/23/07	LMP
Benzo(a)anthracene	0.257	mg/kg dry	0.0218	0.0745	5		07/23/07	LMP
Benzo(a)pyrene	0.912	mg/kg dry	0.0122	0.0410	5		07/23/07	LMP
Benzo(b)fluoranthene	0.653	mg/kg dry	0.0112	0.0373	5		07/23/07	LMP
Benzo(g,h,i)perylene	0.570	mg/kg dry	0.0213	0.0692	5	CSH	07/23/07	LMP
Benzo(k)fluoranthene	0.334	mg/kg dry	0.0154	0.0517	5		07/23/07	LMP
Chrysene	0.655	mg/kg dry	0.0122	0.0410	5		07/23/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0144	0.0479	5		07/23/07	LMP
Fluoranthene	0.720	mg/kg dry	0.0138	0.0463	5		07/23/07	LMP
Fluorene	0.101	mg/kg dry	0.0176	0.0586	5		07/23/07	LMP
Indeno(1,2,3-cd)pyrene	0.524	mg/kg dry	0.0117	0.0389	5		07/23/07	LMP
Naphthalene	0.170	mg/kg dry	0.0245	0.0799	5		07/23/07	LMP
Phenanthrene	0.731	mg/kg dry	0.0218	0.0714	5		07/23/07	LMP
Pyrene	0.0598	mg/kg dry	0.0150	0.0500	5		07/23/07	LMP

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Sample ID: **West 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 10:30** Lab No. : **0707156-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
MOSA21-2								
Total Solids	93.9	% by Weight	0.03	0.03	1		07/17/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*07/18/07*	
Diesel Range Organics	137	mg/kg dry	47.0	47.0	9.4	D2A, D2B, D5	07/19/07	LMP

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REPORT DATE : 07/24/07 10:33
PREPARED BY : JRS

Sample ID: **East 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 10:45** Lab No. : **0707156-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 3050B								
ICP Solid Metal Prep	Completed	N/A			1		07/18/07	DJB
EPA 6010B - Total								
Total Lead	48.8	mg/kg dry	0.584	1.93	1		07/19/07	BMS
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.803	mg/kg dry	0.013	0.025	1		07/17/07	LMP
1,3,5-Trimethylbenzene	0.431	mg/kg dry	0.018	0.025	1		07/17/07	LMP
Benzene	0.280	mg/kg dry	0.016	0.025	1		07/17/07	LMP
Ethylbenzene	0.704	mg/kg dry	0.018	0.025	1		07/17/07	LMP
Gasoline Range Organics	20.7	mg/kg dry	5.00	5.00	1	G6, G2	07/17/07	LMP
m&p-Xylene	1.68	mg/kg dry	0.021	0.025	1		07/17/07	LMP
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		07/17/07	LMP
o-Xylene	0.795	mg/kg dry	0.016	0.025	1		07/17/07	LMP
Toluene	1.18	mg/kg dry	0.017	0.025	1		07/17/07	LMP
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: MLS*					*Date Prepared:*	*07/19/07*	
1-Methylnaphthalene	0.131	mg/kg dry	0.0203	0.0658	5		07/23/07	LMP
2-Methylnaphthalene	0.334	mg/kg dry	0.0225	0.0768	5		07/23/07	LMP
Acenaphthene	ND	mg/kg dry	0.0258	0.0877	5		07/23/07	LMP
Acenaphthylene	ND	mg/kg dry	0.0362	0.121	5		07/23/07	LMP
Anthracene	ND	mg/kg dry	0.0175	0.0587	5		07/23/07	LMP
Benzo(a)anthracene	0.106	mg/kg dry	0.0225	0.0768	5		07/23/07	LMP
Benzo(a)pyrene	0.275	mg/kg dry	0.0126	0.0422	5		07/23/07	LMP
Benzo(b)fluoranthene	0.217	mg/kg dry	0.0115	0.0384	5		07/23/07	LMP
Benzo(g,h,i)perylene	0.232	mg/kg dry	0.0219	0.0713	5	CSH	07/23/07	LMP
Benzo(k)fluoranthene	0.0798	mg/kg dry	0.0159	0.0532	5		07/23/07	LMP
Chrysene	0.279	mg/kg dry	0.0126	0.0422	5		07/23/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0148	0.0493	5		07/23/07	LMP
Fluoranthene	0.469	mg/kg dry	0.0143	0.0477	5		07/23/07	LMP
Fluorene	0.0660	mg/kg dry	0.0181	0.0603	5		07/23/07	LMP
Indeno(1,2,3-cd)pyrene	0.205	mg/kg dry	0.0121	0.0400	5		07/23/07	LMP
Naphthalene	0.0884	mg/kg dry	0.0252	0.0822	5		07/23/07	LMP
Phenanthrene	0.527	mg/kg dry	0.0225	0.0735	5		07/23/07	LMP
Pyrene	0.0228	mg/kg dry	0.0155	0.0515	5	J	07/23/07	LMP

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PREPARED BY : JRS

Sample ID: **East 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 10:45** Lab No. : **0707156-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
MOSA21-2								
Total Solids	91.2	% by Weight	0.03	0.03	1		07/17/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*07/18/07*	
Diesel Range Organics	838	mg/kg dry	43.6	43.6	8.72	D2B	07/20/07	LMP

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REPORT DATE : 07/24/07 10:33
PREPARED BY : JRS

Sample ID: **North 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 11:40** Lab No. : **0707156-04**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 3050B								
ICP Solid Metal Prep	Completed	N/A			1		07/18/07	DJB
EPA 6010B - Total								
Total Lead	109	mg/kg dry	0.569	1.88	1		07/19/07	BMS
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.577	mg/kg dry	0.013	0.025	1.01		07/17/07	LMP
1,3,5-Trimethylbenzene	0.171	mg/kg dry	0.018	0.025	1.01		07/17/07	LMP
Benzene	0.151	mg/kg dry	0.016	0.025	1.01		07/17/07	LMP
Ethylbenzene	0.320	mg/kg dry	0.018	0.025	1.01		07/17/07	LMP
Gasoline Range Organics	19.9	mg/kg dry	5.00	5.00	1.01	G6, G2	07/17/07	LMP
m&p-Xylene	1.03	mg/kg dry	0.021	0.025	1.01		07/17/07	LMP
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1.01		07/17/07	LMP
o-Xylene	0.842	mg/kg dry	0.016	0.025	1.01		07/17/07	LMP
Toluene	1.01	mg/kg dry	0.017	0.025	1.01		07/17/07	LMP
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: MLS*					*Date Prepared:*	*07/19/07*	
1-Methylnaphthalene	ND	mg/kg dry	0.0790	0.256	20		07/23/07	LMP
2-Methylnaphthalene	0.399	mg/kg dry	0.0875	0.299	20		07/23/07	LMP
Acenaphthene	0.284	mg/kg dry	0.100	0.342	20	J	07/23/07	LMP
Acenaphthylene	ND	mg/kg dry	0.141	0.470	20		07/23/07	LMP
Anthracene	0.699	mg/kg dry	0.0683	0.228	20		07/23/07	LMP
Benzo(a)anthracene	0.791	mg/kg dry	0.0875	0.299	20		07/23/07	LMP
Benzo(a)pyrene	1.15	mg/kg dry	0.0491	0.164	20		07/23/07	LMP
Benzo(b)fluoranthene	0.791	mg/kg dry	0.0448	0.149	20		07/23/07	LMP
Benzo(g,h,i)perylene	0.737	mg/kg dry	0.0854	0.277	20	CSH	07/23/07	LMP
Benzo(k)fluoranthene	0.419	mg/kg dry	0.0619	0.207	20		07/23/07	LMP
Chrysene	1.18	mg/kg dry	0.0491	0.164	20		07/23/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0576	0.192	20		07/23/07	LMP
Fluoranthene	2.92	mg/kg dry	0.0555	0.186	20		07/23/07	LMP
Fluorene	0.350	mg/kg dry	0.0704	0.235	20		07/23/07	LMP
Indeno(1,2,3-cd)pyrene	0.547	mg/kg dry	0.0470	0.156	20		07/23/07	LMP
Naphthalene	0.294	mg/kg dry	0.0982	0.320	20	J	07/23/07	LMP
Phenanthrene	2.87	mg/kg dry	0.0875	0.286	20		07/23/07	LMP
Pyrene	0.372	mg/kg dry	0.0602	0.200	20		07/23/07	LMP

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PREPARED BY : JRS

Sample ID: **North 2.5** Matrix: **Soil** Sample Date/Time: **07/11/07 11:40** Lab No. : **0707156-04**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
MOSA21-2								
Total Solids	93.7	% by Weight	0.03	0.03	1		07/17/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*07/18/07*	
Diesel Range Organics	414	mg/kg dry	47.4	47.4	9.49	D2A, D2B, D5	07/20/07	LMP

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Qualifier Descriptions

J	Estimated concentration below laboratory quantitation level.
G6	The chromatogram contains significant number of peaks and a raised baseline outside the GRO window.
G2	The chromatogram is characteristic of a weathered gasoline.
D5	The chromatogram contained significant peaks and a raised baseline outside the DRO window.
D2B	The chromatogram is characteristic for a heavier petroleum product other than diesel (i.e. motor oil, hydraulic oil, etc.).
D2A	The chromatogram is characterics tic for a light petroleum product (i.e. gasoline, weathered gasoline, mineral spirits, etc.).
CSH	Check standard for this analyte exhibited a high bias. Sample results may also be biased high.
COMP	Completed

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quantltation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO and EPA 8021 methanol and WI DNR methylene chloride preserved soils being reported to the State of Wisconsin.

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

Methanol Soils for WI GRO and EPA 8021 are reported to the LOQ.

SIEMENS

Sample Receipt Report

Client: Gannett Fleming 070715G Date Received: 7/13/07

Analytical No.: -1 Through -4

Check all deviations from EPA or WDNR sample protocol.

[ ] Sample(s) received at ____°C which is above the EPA and WDNR limit of 4°C.

[ ] VOC vial(s) received with headspace. Explain: _____

_____

[ ] Sample(s) received in bottles not furnished by Enviroscan. Preservation method, if used, is unknown.

[ ] Sample(s) not properly preserved per EPA/WDNR protocol for the following: _____

_____

[ ] Sample(s) received beyond EPA holding time for: _____

_____

[ ] Sample date/time not supplied by client. Actual holding time unknown.

[ ] GRO/PVOC/VOC/DRO (circle appropriate) sample(s) are <19.5 gms and this report is the flag for that information. Sample(s) under-weight:_____

_____

[ ] GRO/PVOC/VOC (circle appropriate) sample(s) were between 26.4-35.4 gms so methanol was added in a 1:1 ratio. Sample(s) included: 070715G-2 +4mL.

_____

[ ] GRO/PVOC/VOC/DRO (circle appropriate) sample(s) were >35.4 gms and are required to be rejected. Sample(s) included:_____

[ ] Other: _____

_____

Client contact concerning the above deviations:

Client _____ (contact name) notified of the above deviation(s) on __/__/__ at ___:___ am/pm by _____ and the client ordered:
(signature)

[ ] Proceed with analyses as ordered.

[ ] Proceed with analyses after taking the following corrective action: _____

_____

[ ] Do NOT proceed with analyses.

Siemens Water Technologies Corp. 1301 West Military Road Rothschild, WI 54474 Tel: (800) 338-7226 Fax: (715) 355 3221

REQUEST FOR SERVICES

USFilter A Siemens Business

ENVIROSCAN SERVICES 301 W. MILITARY RD. ROTHSCHILD, WI 54474 1-800-338-SCAN

REPORT TO:		**BILL TO:** (if different from Report To info)	
Name:	Jeff King	Name:	Liz Lundmark
Company:	Gannett Fleming	Company:	Murphy Oil USA INC
Address:	8025 Excelsior Dr	Address:	2407 Stinson Ave
	Madison, WI 53717		Superior, WI 54880
Phone:	(608) 836-1500	Phone:	( )
P.O.#			
Project #	34265.003 Quote #		
Location	Murphy Marine Terminal		

Sample Type
(Check all that apply)
- ☐ Groundwater
- ☐ Wastewater
- ☒ Soil/Solid
- ☐ Drinking Water
- ☐ Oil
- ☐ Vapor
- ☐ Other

Turnaround Time
- ☒ Normal
- ☐ Rush (Pre-approved by Lab)

Date Needed ________
Approved By ________

0707156

ANALYTICAL REQUESTS
(use separate sheet if necessary)

LAB USE ONLY	DATE	TIME	No. of Containers COMP	No. of Containers GRAB	SAMPLE ID	DRO	GRO/PVOCs	PAH	Lead		REMARKS
-1	7-11-07	10:00		3	South 2.5	X	X	X	X		1-2oz NP 1-2oz w/MeOH 1-4oz jar
-2	↓	10:30		3	West 2.5	X	X	X	X		
-3	↓	10:45		3	East 2.5	X	X	X	X		
-4	↓	11:40		3	North 2.5	X	X	X	X		

Del'v: Hand (Comm.) Cumnan
Ship. Cont. OK (Y) N N/A
Samples leaking? Y (N) N/A
Seals OK? (Y) N N/A 4.0
Rec'd on ice? (Y) N N/A __°C

Comments: ________

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* [signature]

RELINQUISHED BY: *(Signature)*	DATE/TIME	RECEIVED BY: *(Signature)*	
[signature]	7-11-07		
RELINQUISHED BY: *(Signature)*	DATE/TIME	RECEIVED BY: *(Signature)*	
RELINQUISHED BY: *(Signature)*	DATE/TIME	RECEIVED FOR LABORATORY BY: *(Signature)*	DATE/TIME
		[signature]	7-13-07 1447

SIEMENS

September 24, 2007

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

REPORT NO.: 0709207 **PROJECT NO.: 34265.003 Murphy Oil Superior**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received September 14, 2007.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

James Salkowski

Lab Director
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Approved by:

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.enviroscan.usfilter.com

The total number of pages in this report, including this page is 12.

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SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
0709207-01	N-1	09/12/07 13:15	Soil
0709207-02	W-1	09/12/07 13:30	Soil
0709207-03	S-1	09/12/07 13:45	Soil
0709207-04	E-1	09/12/07 14:00	Soil

SIEMENS

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **N-1** Matrix: **Soil** Sample Date/Time: **09/12/07 13:15** Lab No. : **0709207-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.398	mg/kg dry	0.014	0.027	1.06		09/18/07	ALZ
1,3,5-Trimethylbenzene	0.124	mg/kg dry	0.019	0.027	1.06		09/18/07	ALZ
Benzene	0.089	mg/kg dry	0.017	0.027	1.06		09/18/07	ALZ
Ethylbenzene	0.181	mg/kg dry	0.019	0.027	1.06		09/18/07	ALZ
Gasoline Range Organics	9.98	mg/kg dry	5.32	5.32	1.06	G2	09/18/07	ALZ
m&p-Xylene	0.652	mg/kg dry	0.022	0.027	1.06		09/18/07	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.012	0.027	1.06		09/18/07	ALZ
o-Xylene	0.550	mg/kg dry	0.017	0.027	1.06		09/18/07	ALZ
Toluene	0.514	mg/kg dry	0.018	0.027	1.06		09/18/07	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*09/18/07*	
1-Methylnaphthalene	ND	mg/kg dry	0.198	0.642	50		09/20/07	LMP
2-Methylnaphthalene	ND	mg/kg dry	0.219	0.749	50		09/20/07	LMP
Acenaphthene	ND	mg/kg dry	0.252	0.857	50		09/20/07	LMP
Acenaphthylene	ND	mg/kg dry	0.353	1.18	50		09/20/07	LMP
Anthracene	0.354	mg/kg dry	0.171	0.573	50	J	09/20/07	LMP
Benzo(a)anthracene	0.411	mg/kg dry	0.219	0.749	50	J	09/20/07	LMP
Benzo(a)pyrene	0.407	mg/kg dry	0.123	0.412	50	J	09/20/07	LMP
Benzo(b)fluoranthene	0.442	mg/kg dry	0.112	0.375	50		09/20/07	LMP
Benzo(g,h,i)perylene	0.297	mg/kg dry	0.214	0.696	50	J	09/20/07	LMP
Benzo(k)fluoranthene	0.171	mg/kg dry	0.155	0.519	50	J	09/20/07	LMP
Chrysene	0.712	mg/kg dry	0.123	0.412	50		09/20/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.145	0.482	50		09/20/07	LMP
Fluoranthene	1.49	mg/kg dry	0.139	0.466	50		09/20/07	LMP
Fluorene	ND	mg/kg dry	0.177	0.589	50		09/20/07	LMP
Indeno(1,2,3-cd)pyrene	0.340	mg/kg dry	0.118	0.391	50	J	09/20/07	LMP
Naphthalene	ND	mg/kg dry	0.246	0.803	50		09/20/07	LMP
Phenanthrene	1.35	mg/kg dry	0.219	0.717	50		09/20/07	LMP
Pyrene	0.223	mg/kg dry	0.151	0.503	50	J	09/20/07	LMP
MOSA21-2								
Total Solids	93.4	% by Weight	0.03	0.03	1		09/19/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	

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Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **N-1** Matrix: **Soil** Sample Date/Time: **09/12/07 13:15** Lab No. : **0709207-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	
Diesel Range Organics	205	mg/kg dry	22.7	22.7	4.54	D2A, D2B, D5	09/21/07	LMP

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Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **W-1** Matrix: **Soil** Sample Date/Time: **09/12/07 13:30** Lab No. : **0709207-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.630	mg/kg dry	0.013	0.026	1.03		09/18/07	ALZ
1,3,5-Trimethylbenzene	0.305	mg/kg dry	0.019	0.026	1.03		09/18/07	ALZ
Benzene	0.285	mg/kg dry	0.017	0.026	1.03		09/18/07	ALZ
Ethylbenzene	0.315	mg/kg dry	0.019	0.026	1.03		09/18/07	ALZ
Gasoline Range Organics	15.0	mg/kg dry	5.16	5.16	1.03	G2	09/18/07	ALZ
m&p-Xylene	1.43	mg/kg dry	0.022	0.026	1.03		09/18/07	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.026	1.03		09/18/07	ALZ
o-Xylene	0.623	mg/kg dry	0.017	0.026	1.03		09/18/07	ALZ
Toluene	1.65	mg/kg dry	0.018	0.026	1.03		09/18/07	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*09/18/07*	
1-Methylnaphthalene	ND	mg/kg dry	0.406	1.32	100		09/20/07	LMP
2-Methylnaphthalene	1.06	mg/kg dry	0.450	1.54	100	J	09/20/07	LMP
Acenaphthene	ND	mg/kg dry	0.515	1.75	100		09/20/07	LMP
Acenaphthylene	ND	mg/kg dry	0.724	2.41	100		09/20/07	LMP
Anthracene	0.948	mg/kg dry	0.351	1.17	100	J	09/20/07	LMP
Benzo(a)anthracene	0.699	mg/kg dry	0.450	1.54	100	J	09/20/07	LMP
Benzo(a)pyrene	0.732	mg/kg dry	0.252	0.844	100	J	09/20/07	LMP
Benzo(b)fluoranthene	0.844	mg/kg dry	0.230	0.768	100		09/20/07	LMP
Benzo(g,h,i)perylene	ND	mg/kg dry	0.439	1.43	100		09/20/07	LMP
Benzo(k)fluoranthene	ND	mg/kg dry	0.318	1.06	100		09/20/07	LMP
Chrysene	1.35	mg/kg dry	0.252	0.844	100		09/20/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.296	0.987	100		09/20/07	LMP
Fluoranthene	3.13	mg/kg dry	0.285	0.954	100		09/20/07	LMP
Fluorene	0.607	mg/kg dry	0.362	1.21	100	J	09/20/07	LMP
Indeno(1,2,3-cd)pyrene	0.586	mg/kg dry	0.241	0.800	100	J	09/20/07	LMP
Naphthalene	0.697	mg/kg dry	0.504	1.64	100	J	09/20/07	LMP
Phenanthrene	3.40	mg/kg dry	0.450	1.47	100		09/20/07	LMP
Pyrene	0.404	mg/kg dry	0.309	1.03	100	J	09/20/07	LMP
MOSA21-2								
Total Solids	91.2	% by Weight	0.03	0.03	1		09/19/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	

SIEMENS

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **W-1** Matrix: **Soil** Sample Date/Time: **09/12/07 13:30** Lab No. : **0709207-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	
Diesel Range Organics	390	mg/kg dry	21.7	21.7	4.34	D2A, D2B, D5	09/21/07	LMP

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Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **S-1** Matrix: **Soil** Sample Date/Time: **09/12/07 13:45** Lab No. : **0709207-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.409	mg/kg dry	0.013	0.025	1		09/18/07	ALZ
1,3,5-Trimethylbenzene	0.187	mg/kg dry	0.018	0.025	1		09/18/07	ALZ
Benzene	0.161	mg/kg dry	0.016	0.025	1		09/18/07	ALZ
Ethylbenzene	0.228	mg/kg dry	0.018	0.025	1		09/18/07	ALZ
Gasoline Range Organics	9.39	mg/kg dry	5.00	5.00	1	G2, G6	09/18/07	ALZ
m&p-Xylene	0.789	mg/kg dry	0.021	0.025	1		09/18/07	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		09/18/07	ALZ
o-Xylene	0.397	mg/kg dry	0.016	0.025	1		09/18/07	ALZ
Toluene	0.643	mg/kg dry	0.017	0.025	1		09/18/07	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*09/18/07*	
1-Methylnaphthalene	ND	mg/kg dry	0.810	2.63	200		09/20/07	LMP
2-Methylnaphthalene	ND	mg/kg dry	0.897	3.06	200		09/20/07	LMP
Acenaphthene	ND	mg/kg dry	1.03	3.50	200		09/20/07	LMP
Acenaphthylene	ND	mg/kg dry	1.44	4.81	200		09/20/07	LMP
Anthracene	1.85	mg/kg dry	0.700	2.34	200	J	09/20/07	LMP
Benzo(a)anthracene	1.80	mg/kg dry	0.897	3.06	200	J	09/20/07	LMP
Benzo(a)pyrene	ND	mg/kg dry	0.503	1.68	200		09/20/07	LMP
Benzo(b)fluoranthene	1.39	mg/kg dry	0.460	1.53	200	J	09/20/07	LMP
Benzo(g,h,I)perylene	ND	mg/kg dry	0.875	2.84	200		09/20/07	LMP
Benzo(k)fluoranthene	ND	mg/kg dry	0.635	2.12	200		09/20/07	LMP
Chrysene	2.78	mg/kg dry	0.503	1.68	200		09/20/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.591	1.97	200		09/20/07	LMP
Fluoranthene	6.87	mg/kg dry	0.569	1.90	200		09/20/07	LMP
Fluorene	0.979	mg/kg dry	0.722	2.41	200	J	09/20/07	LMP
Indeno(1,2,3-cd)pyrene	0.726	mg/kg dry	0.481	1.60	200	J	09/20/07	LMP
Naphthalene	ND	mg/kg dry	1.01	3.28	200		09/20/07	LMP
Phenanthrene	6.48	mg/kg dry	0.897	2.93	200		09/20/07	LMP
Pyrene	1.09	mg/kg dry	0.617	2.05	200	J	09/20/07	LMP
MOSA21-2								
Total Solids	91.4	% by Weight	0.03	0.03	1		09/19/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	

SIEMENS

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **S-1** Matrix: **Soil** Sample Date/Time: **09/12/07 13:45** Lab No. : **0709207-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	
Diesel Range Organics	400	mg/kg dry	24.3	24.3	4.86	D2A, D2B, D5	09/21/07	LMP

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Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **E-1** Matrix: **Soil** Sample Date/Time: **09/12/07 14:00** Lab No. : **0709207-04**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.814	mg/kg dry	0.014	0.027	1.09		09/18/07	ALZ
1,3,5-Trimethylbenzene	0.378	mg/kg dry	0.020	0.027	1.09		09/18/07	ALZ
Benzene	0.253	mg/kg dry	0.017	0.027	1.09		09/18/07	ALZ
Ethylbenzene	0.567	mg/kg dry	0.020	0.027	1.09		09/18/07	ALZ
Gasoline Range Organics	20.7	mg/kg dry	5.43	5.43	1.09	G7	09/18/07	ALZ
m&p-Xylene	2.39	mg/kg dry	0.023	0.027	1.09		09/18/07	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.012	0.027	1.09		09/18/07	ALZ
o-Xylene	0.847	mg/kg dry	0.017	0.027	1.09		09/18/07	ALZ
Toluene	2.04	mg/kg dry	0.018	0.027	1.09		09/18/07	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*09/18/07*	
1-Methylnaphthalene	0.438	mg/kg dry	0.0404	0.131	10		09/20/07	LMP
2-Methylnaphthalene	1.40	mg/kg dry	0.0448	0.153	10		09/20/07	LMP
Acenaphthene	ND	mg/kg dry	0.0514	0.175	10		09/20/07	LMP
Acenaphthylene	ND	mg/kg dry	0.0721	0.240	10		09/20/07	LMP
Anthracene	ND	mg/kg dry	0.0350	0.117	10		09/20/07	LMP
Benzo(a)anthracene	ND	mg/kg dry	0.0448	0.153	10		09/20/07	LMP
Benzo(a)pyrene	0.373	mg/kg dry	0.0251	0.0842	10		09/20/07	LMP
Benzo(b)fluoranthene	0.520	mg/kg dry	0.0230	0.0765	10		09/20/07	LMP
Benzo(g,h,i)perylene	0.545	mg/kg dry	0.0437	0.142	10		09/20/07	LMP
Benzo(k)fluoranthene	0.143	mg/kg dry	0.0317	0.106	10		09/20/07	LMP
Chrysene	0.453	mg/kg dry	0.0251	0.0842	10		09/20/07	LMP
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0295	0.0984	10		09/20/07	LMP
Fluoranthene	ND	mg/kg dry	0.0284	0.0951	10		09/20/07	LMP
Fluorene	ND	mg/kg dry	0.0361	0.120	10		09/20/07	LMP
Indeno(1,2,3-cd)pyrene	0.748	mg/kg dry	0.0240	0.0798	10		09/20/07	LMP
Naphthalene	0.284	mg/kg dry	0.0503	0.164	10		09/20/07	LMP
Phenanthrene	ND	mg/kg dry	0.0448	0.146	10		09/20/07	LMP
Pyrene	ND	mg/kg dry	0.0308	0.103	10		09/20/07	LMP
MOSA21-2								
Total Solids	91.5	% by Weight	0.03	0.03	1		09/19/07	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	

SIEMENS

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265.003 Murphy Oil Superior
REPORT NO. : 0709207
DATE REC'D 09/14/07 11:00
REPORT DATE : 09/24/07 09:50
PREPARED BY : JRS

Sample ID: **E-1** Matrix: **Soil** Sample Date/Time: **09/12/07 14:00** Lab No. : **0709207-04**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: MLS*					*Date Prepared:*	*09/20/07*	
Diesel Range Organics	438	mg/kg dry	23.4	23.4	4.68	D2A, D2B, D5	09/21/07	LMP

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Qualifier Descriptions

J	Estimated concentration below laboratory quantitation level.
G7	The chromatogram is characteristic for gasoline, however, either additional peaks are present or PVOC peaks are not proportional to gasoline, indicating the presence of additional compounds.
G6	The chromatogram contains significant number of peaks and a raised baseline outside the GRO window.
G2	The chromatogram is characteristic of a weathered gasoline.
D5	The chromatogram contained significant peaks and a raised baseline outside the DRO window.
D2B	The chromatogram is characteristic for a heavier petroleum product other than diesel (i.e. motor oil, hydraulic oil, etc.).
D2A	The chromatogram is characterics tic for a light petroleum product (i.e. gasoline, weathered gasoline, mineral spirits, etc.).

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quantitation (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methylene chloride preserved soils being reported to the State of Wisconsin.

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

SIEMENS

Company Name	Project
Gannett Fleming	[redacted] Murphy O, 1, Spencer 34265-003
Report Mailing Address 8025 Excelsior Dr Jeff King Madison, WI 53717	**Contact Name, Phone, Fax, Email** 608-836-1500 Jeff King JKing@gfnet.com
Invoice Address Stinson Ave Liz Lundmark Superior, WI	**Purchase Order #** / **Invoice Contact and Phone No.** Liz Lundmark

Matrix: Drinking Water Groundwater Wastewater (Soil/Solid) Other: _____

Wis. PECFA Project subject to U&C? Yes No

For Compliance Monitoring? Yes No State: _____
(If Yes, please specify Agency or Regulation) Agency/Reg.: _____

Turnaround Request: [X] Normal (10 Bus. Days)
[ ] Rush (Must be pre-approved by Lab and is subject to surchages)
Date Needed: _____

WO No: 6709207

Lab Use Only	Sample Date	Sample Time	No. of Containers Comp	No. of Containers Grab	Sample ID	GRO/PVOCs	DRO	PAH					Comments
-1	9-12-07	1:15		3	N-1	X	X	X					1-2oz jar NP, 1-2oz jar MeOH, 1-4oz jar
-2	↓	1:30		3	W-1	X	X	X					
-3		1:45		3	S-1	X	X	X					
-4	↓	2:00		3	E-1	X	X	X					

Lab Use Only

Delivered by	(Walk-in)		Courier
Ship. Cont. Ok?	Y	N	NA
Samples Leaking?	Y	(N)	NA
Seals OK?	(Y)	N	NA
Rec'd on Ice?	(Y)	N	NA

Sample Receiving Comments: 3 G

Chain of Custody Record

Relinquished By:	Date	Time	Received By:
[signature]	9-14-07	11:00	
	9-14-07	1100	[signature]

SIEMENS

September 25, 2009

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

REPORT NO.: 0909245 **PROJECT NO.: 34265-003 Murphy, Soil**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received September 12, 2009.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

James Salkowski
Lab Director
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature.

Reviewed by: _____

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.siemens.com/enviroscan

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SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
0909245-01	N-15	09/10/09 09:00	Soil
0909245-02	S-15	09/10/09 09:15	Soil
0909245-03	E-15	09/10/09 09:30	Soil
0909245-04	W-15	09/10/09 09:45	Soil

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Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

PROJECT NO. : 34265-003 Murphy, Soil
REPORT NO. : 0909245
DATE REC'D 09/12/09 16:19
REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **N-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:00** Lab No. : **0909245-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.039	mg/kg dry	0.013	0.025	1		09/17/09	ALZ
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.018	0.025	1		09/17/09	ALZ
Benzene	ND	mg/kg dry	0.016	0.025	1		09/17/09	ALZ
Ethylbenzene	0.051	mg/kg dry	0.018	0.025	1		09/17/09	ALZ
Gasoline Range Organics	ND	mg/kg dry	5.00	5.00	1		09/17/09	ALZ
m&p-Xylene	0.080	mg/kg dry	0.021	0.025	1		09/17/09	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		09/17/09	ALZ
o-Xylene	0.047	mg/kg dry	0.016	0.025	1		09/17/09	ALZ
Toluene	0.052	mg/kg dry	0.017	0.025	1		09/17/09	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: KAM*					*Date Prepared:*	*09/21/09*	
1-Methylnaphthalene	ND	mg/kg dry	0.0807	0.262	20		09/22/09	ALZ
2-Methylnaphthalene	ND	mg/kg dry	0.0894	0.305	20		09/22/09	ALZ
Acenaphthene	ND	mg/kg dry	0.103	0.349	20		09/22/09	ALZ
Acenaphthylene	ND	mg/kg dry	0.144	0.480	20		09/22/09	ALZ
Anthracene	0.286	mg/kg dry	0.0698	0.233	20		09/22/09	ALZ
Benzo(a)anthracene	0.598	mg/kg dry	0.0894	0.305	20		09/22/09	ALZ
Benzo(a)pyrene	0.545	mg/kg dry	0.0502	0.168	20		09/22/09	ALZ
Benzo(b)fluoranthene	0.608	mg/kg dry	0.0458	0.153	20		09/22/09	ALZ
Benzo(g,h,i)perylene	0.395	mg/kg dry	0.0872	0.284	20		09/22/09	ALZ
Benzo(k)fluoranthene	0.295	mg/kg dry	0.0632	0.212	20		09/22/09	ALZ
Chrysene	0.732	mg/kg dry	0.0502	0.168	20		09/22/09	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0589	0.196	20		09/22/09	ALZ
Fluoranthene	1.52	mg/kg dry	0.0567	0.190	20		09/22/09	ALZ
Fluorene	ND	mg/kg dry	0.0720	0.240	20		09/22/09	ALZ
Indeno(1,2,3-cd)pyrene	0.486	mg/kg dry	0.0480	0.159	20		09/22/09	ALZ
Naphthalene	ND	mg/kg dry	0.100	0.327	20		09/22/09	ALZ
Phenanthrene	0.825	mg/kg dry	0.0894	0.292	20		09/22/09	ALZ
Pyrene	1.32	mg/kg dry	0.0615	0.205	20		09/22/09	ALZ
MOSA21-2								
Total Solids	91.7	% by Weight	0.03	0.03	1		09/15/09	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	

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REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **N-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:00** Lab No. : **0909245-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	
Diesel Range Organics	44.3	mg/kg dry	4.02	4.02	0.805	D2B, D5	09/24/09	ALZ

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REPORT NO. : 0909245
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REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **S-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:15** Lab No. : **0909245-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	1.32	mg/kg dry	0.015	0.029	1.16		09/17/09	ALZ
1,3,5-Trimethylbenzene	0.481	mg/kg dry	0.021	0.029	1.16		09/17/09	ALZ
Benzene	0.475	mg/kg dry	0.019	0.029	1.16		09/17/09	ALZ
Ethylbenzene	2.19	mg/kg dry	0.021	0.029	1.16		09/17/09	ALZ
Gasoline Range Organics	33.5	mg/kg dry	5.81	5.81	1.16	G2	09/17/09	ALZ
m&p-Xylene	3.65	mg/kg dry	0.024	0.029	1.16		09/17/09	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.013	0.029	1.16		09/17/09	ALZ
o-Xylene	1.43	mg/kg dry	0.019	0.029	1.16		09/17/09	ALZ
Toluene	2.68	mg/kg dry	0.020	0.029	1.16		09/17/09	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: KAM*					*Date Prepared:*	*09/21/09*	
1-Methylnaphthalene	0.446	mg/kg dry	0.0834	0.271	20		09/22/09	ALZ
2-Methylnaphthalene	0.806	mg/kg dry	0.0924	0.316	20		09/22/09	ALZ
Acenaphthene	ND	mg/kg dry	0.106	0.361	20		09/22/09	ALZ
Acenaphthylene	ND	mg/kg dry	0.149	0.496	20		09/22/09	ALZ
Anthracene	ND	mg/kg dry	0.0722	0.241	20		09/22/09	ALZ
Benzo(a)anthracene	0.427	mg/kg dry	0.0924	0.316	20		09/22/09	ALZ
Benzo(a)pyrene	0.346	mg/kg dry	0.0519	0.174	20		09/22/09	ALZ
Benzo(b)fluoranthene	0.521	mg/kg dry	0.0474	0.158	20		09/22/09	ALZ
Benzo(g,h,i)perylene	0.355	mg/kg dry	0.0902	0.293	20		09/22/09	ALZ
Benzo(k)fluoranthene	0.234	mg/kg dry	0.0654	0.219	20		09/22/09	ALZ
Chrysene	0.735	mg/kg dry	0.0519	0.174	20		09/22/09	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0609	0.203	20		09/22/09	ALZ
Fluoranthene	1.35	mg/kg dry	0.0586	0.196	20		09/22/09	ALZ
Fluorene	ND	mg/kg dry	0.0744	0.248	20		09/22/09	ALZ
Indeno(1,2,3-cd)pyrene	0.402	mg/kg dry	0.0496	0.165	20		09/22/09	ALZ
Naphthalene	0.256	mg/kg dry	0.104	0.338	20	J	09/22/09	ALZ
Phenanthrene	ND	mg/kg dry	0.0924	0.302	20		09/22/09	ALZ
Pyrene	0.500	mg/kg dry	0.0636	0.212	20		09/22/09	ALZ
MOSA21-2								
Total Solids	88.7	% by Weight	0.03	0.03	1		09/15/09	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	

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PROJECT NO. : 34265-003 Murphy, Soil
REPORT NO. : 0909245
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REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **S-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:15** Lab No. : **0909245-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	
Diesel Range Organics	445	mg/kg dry	26.8	26.8	5.37	D2A, D1, D2B	09/24/09	ALZ

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PROJECT NO. : 34265-003 Murphy, Soil
REPORT NO. : 0909245
DATE REC'D 09/12/09 16:19
REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **E-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:30** Lab No. : **0909245-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.118	mg/kg dry	0.014	0.026	1.04		09/18/09	ALZ
1,3,5-Trimethylbenzene	0.062	mg/kg dry	0.019	0.026	1.04		09/18/09	ALZ
Benzene	0.124	mg/kg dry	0.017	0.026	1.04		09/18/09	ALZ
Ethylbenzene	0.098	mg/kg dry	0.019	0.026	1.04		09/18/09	ALZ
Gasoline Range Organics	ND	mg/kg dry	5.20	5.20	1.04		09/18/09	ALZ
m&p-Xylene	0.269	mg/kg dry	0.022	0.026	1.04		09/18/09	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.026	1.04		09/18/09	ALZ
o-Xylene	0.197	mg/kg dry	0.017	0.026	1.04		09/18/09	ALZ
Toluene	0.365	mg/kg dry	0.018	0.026	1.04		09/18/09	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: KAM*					*Date Prepared:*	*09/21/09*	
1-Methylnaphthalene	ND	mg/kg dry	0.0831	0.269	20		09/22/09	ALZ
2-Methylnaphthalene	ND	mg/kg dry	0.0920	0.314	20		09/22/09	ALZ
Acenaphthene	ND	mg/kg dry	0.105	0.359	20		09/22/09	ALZ
Acenaphthylene	ND	mg/kg dry	0.148	0.494	20		09/22/09	ALZ
Anthracene	ND	mg/kg dry	0.0718	0.240	20		09/22/09	ALZ
Benzo(a)anthracene	0.776	mg/kg dry	0.0920	0.314	20		09/22/09	ALZ
Benzo(a)pyrene	0.442	mg/kg dry	0.0516	0.173	20		09/22/09	ALZ
Benzo(b)fluoranthene	0.526	mg/kg dry	0.0471	0.157	20		09/22/09	ALZ
Benzo(g,h,i)perylene	0.389	mg/kg dry	0.0898	0.292	20		09/22/09	ALZ
Benzo(k)fluoranthene	0.291	mg/kg dry	0.0651	0.218	20		09/22/09	ALZ
Chrysene	0.971	mg/kg dry	0.0516	0.173	20		09/22/09	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0606	0.202	20		09/22/09	ALZ
Fluoranthene	2.46	mg/kg dry	0.0584	0.195	20		09/22/09	ALZ
Fluorene	0.250	mg/kg dry	0.0741	0.247	20		09/22/09	ALZ
Indeno(1,2,3-cd)pyrene	0.308	mg/kg dry	0.0494	0.164	20		09/22/09	ALZ
Naphthalene	ND	mg/kg dry	0.103	0.337	20		09/22/09	ALZ
Phenanthrene	2.54	mg/kg dry	0.0920	0.301	20		09/22/09	ALZ
Pyrene	1.54	mg/kg dry	0.0633	0.211	20		09/22/09	ALZ
MOSA21-2								
Total Solids	89.1	% by Weight	0.03	0.03	1		09/15/09	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	

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REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **E-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:30** Lab No. : **0909245-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	
Diesel Range Organics	401	mg/kg dry	22.2	22.2	4.44	D2B, D5	09/24/09	ALZ

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PROJECT NO. : 34265-003 Murphy, Soil
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DATE REC'D 09/12/09 16:19
REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **W-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:45** Lab No. : **0909245-04**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	1.01	mg/kg dry	0.014	0.028	1.1		09/18/09	ALZ
1,3,5-Trimethylbenzene	0.329	mg/kg dry	0.020	0.028	1.1		09/18/09	ALZ
Benzene	0.154	mg/kg dry	0.018	0.028	1.1		09/18/09	ALZ
Ethylbenzene	0.523	mg/kg dry	0.020	0.028	1.1		09/18/09	ALZ
Gasoline Range Organics	24.9	mg/kg dry	5.51	5.51	1.1	G2	09/18/09	ALZ
m&p-Xylene	1.47	mg/kg dry	0.023	0.028	1.1		09/18/09	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.012	0.028	1.1		09/18/09	ALZ
o-Xylene	1.05	mg/kg dry	0.018	0.028	1.1		09/18/09	ALZ
Toluene	0.817	mg/kg dry	0.019	0.028	1.1		09/18/09	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: KAM*					*Date Prepared:*	*09/21/09*	
1-Methylnaphthalene	0.208	mg/kg dry	0.0216	0.0702	5		09/22/09	ALZ
2-Methylnaphthalene	0.325	mg/kg dry	0.0240	0.0819	5		09/22/09	ALZ
Acenaphthene	ND	mg/kg dry	0.0275	0.0936	5		09/22/09	ALZ
Acenaphthylene	ND	mg/kg dry	0.0386	0.129	5		09/22/09	ALZ
Anthracene	ND	mg/kg dry	0.0187	0.0626	5		09/22/09	ALZ
Benzo(a)anthracene	0.137	mg/kg dry	0.0240	0.0819	5		09/22/09	ALZ
Benzo(a)pyrene	0.150	mg/kg dry	0.0135	0.0450	5		09/22/09	ALZ
Benzo(b)fluoranthene	0.233	mg/kg dry	0.0123	0.0409	5		09/22/09	ALZ
Benzo(g,h,i)perylene	0.167	mg/kg dry	0.0234	0.0760	5		09/22/09	ALZ
Benzo(k)fluoranthene	0.149	mg/kg dry	0.0170	0.0567	5		09/22/09	ALZ
Chrysene	0.363	mg/kg dry	0.0135	0.0450	5		09/22/09	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0158	0.0526	5		09/22/09	ALZ
Fluoranthene	0.467	mg/kg dry	0.0152	0.0509	5		09/22/09	ALZ
Fluorene	ND	mg/kg dry	0.0193	0.0643	5		09/22/09	ALZ
Indeno(1,2,3-cd)pyrene	0.177	mg/kg dry	0.0129	0.0427	5		09/22/09	ALZ
Naphthalene	0.176	mg/kg dry	0.0269	0.0877	5		09/22/09	ALZ
Phenanthrene	0.378	mg/kg dry	0.0240	0.0784	5		09/22/09	ALZ
Pyrene	0.145	mg/kg dry	0.0165	0.0549	5		09/22/09	ALZ
MOSA21-2								
Total Solids	85.5	% by Weight	0.03	0.03	1		09/15/09	LNB
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	

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PROJECT NO. : 34265-003 Murphy, Soil
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REPORT DATE : 09/25/09 13:44
PREPARED BY : JRS

Sample ID: **W-15** Matrix: **Soil** Sample Date/Time: **09/10/09 9:45** Lab No. : **0909245-04**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
WI DNR DRO Continued								
Prep Method: WI DNR Soil Extraction	*By: KAM*					*Date Prepared:*	*09/18/09*	
Diesel Range Organics	389	mg/kg dry	24.4	24.4	4.87	D5, D2A, D2B	09/24/09	ALZ

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Qualifier Descriptions

J	Estimated concentration below laboratory quantitation level.
G2	The chromatogram is characteristic of a weathered gasoline.
D5	The chromatogram contained significant peaks and a raised baseline outside the DRO window.
D2B	The chromatogram is characteristic for a heavier petroleum product other than diesel (i.e. motor oil, hydraulic oil, etc.).
D2A	The chromatogram is characericstlc for a light petroleum product (i.e. gasoline, weathered gasoline, mineral spirits, etc.).
D1	The chromatogram is characteristic for a fuel oil/diesel (i.e. #1 or #2 Diesel, Jet Fuel, Kerosene, weathered Diesel, etc.).

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quantitatlon (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = plcocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO, EPA 8021 and WI DNR/EPA 8260B methanol and WI DNR methylene chloride preserved soils being reported to the State of Wisconsin.

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per liter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

State of Wisconsin Methanol Soils for WI GRO, WI DNR/EPA 8260B and EPA 8021 are reported to the LOQ.

SIEMENS

Client: Gannet Fleming **Date Received:** 9/12/09

Analytical Number: 0909245 -1 0 **through** -4

Check all deviations from the EPA or WDNR sample protocol.

[ ] Sample(s) received at _____°C which is above the EPA and WDNR limit of 4°C.

[ ] VOC vial(s) received with headspace.

[ ] Sample(s) received in bottles not furnished by Siemens Water Technologies. The preservation method, if used, is unknown.

[ ] Sample(s) were not properly preserved per EPA or WDNR protocol for the following analyses:
- _____

[ ] Sample(s) were received beyond the EPA/WDNR holding time for the following analyses:
- _____

[ ] Sample date/time not supplied by client. Actual holding time is unknown.

[ ] GRO / PVOC / VOC / DRO (circle) sample(s) are <19.5 grams. This report is the qualifier flag for that QC failure. The client has been contacted for further instructions. Analytical number(s) of the sample(s) under weight are:
- _____

[ ] GRO / PVOC / VOC (circle) sample(s) were between 26.4 and 35.4 grams. Methanol was added in a 1:1 ratio in the lab. Analytical number(s) of the sample(s) affected are:
- 0909245 -1A +5ml

[ ] GRO / PVOC / VOC / DRO (circle) sample(s) are >35.4 grams and are required to be rejected. This report is the qualifier flag for that QC failure. The client has been contacted for further instructions. Analytical number(s) of the sample(s) affected are:
- _____

[ ] Other problems:
- _____

Client contacted concerning the above deviations:

_____ notified of the above deviation(s) on ____/____/____ @
contact name
____:____ am/pm by _____ and the client ordered the following:
initial

[ ] Proceed with analyses as ordered.
[ ] Proceed with analyses after taking the following corrective action:
- _____

[ ] Do NOT proceed with analyses.

Siemens Water Technologies Corp. 301 West Military Road Rothschild, WI 54474 Tel: (800)338-7226 Fax: (715)355-3221

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Company Name	Project
Gannett Fleming	Murphy Oil USA / Marine Terminal 34265-003
Report Mailing Address	**Contact Name, Phone, Fax, Email**
8025 Excelsior Dr Jeff King Madison, WI 53717	P- 608-836-1500 F- 608-831-3337 E- JKing@gfnet.com
Invoice Address	**Purchase Order #** / **Invoice Contact and Phone No.**
2407 Stinson Ave Superior, WI 54880 Murphy Oil USA Inc	Per Siemens 2009 price quote Liz Lundmark

Matrix: Drinking Water Groundwater Wastewater (Soil/Solid) Other:_____

Wis. PECFA Project subject to U&C? Yes (No)

For Compliance Monitoring? (Yes) No (If Yes, please specify Agency or Regulation) State: WI Agency/Reg.: _____

Turnaround Request: [X] Normal (10 Bus. Days) [ ] Rush (Must be pre-approved by Lab and is subject to surchages) Date Needed:_____

WO No: 09092 45

Lab Use Only	Sample Date	Sample Time	No. of Containers Comp	No. of Containers Grab	Sample ID	GRO/PVOCs	DRO	PAH					Comments
-1	9-10-09	9:00		3	N-15	X	X	X					1-20z w/Mesh, 1-20z NP, 1-40z jar
-2		9:15		3	S-15	X	X	X					
-3		9:30		3	E-15	X	X	X					
-4		9:45		3	W-15	X	X	X					

Analyses Requested

Lab Use Only

Delivered by	Walk-in		Courier
Ship. Cont. Ok?	(Y)	N	NA
Samples Leaking?	Y	(N)	NA
Seals OK?	(Y)	N	NA
Rec'd on Ice?	(Y)	N	NA

Sample Receiving Comments: 3.2

Chain of Custody Record

Relinquished By:	Date	Time	Received By:
	9-11-09	10:00	
	9/12/09	1619	

SIEMENS

May 28, 2010

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

Attn: Jeff King

REPORT NO.: 1005230 **PROJECT NO.: 34265-003 Murphy Oil Superior WI**

Please find enclosed the analytical report, including the Sample Summary, Sample Narrative and Chain of Custody for your sample set received May 14, 2010.

All analyses were performed in accordance with NELAC Standards using approved methods as indicated on this report.

If you have any questions about the results, please call. Thank you for using Siemens Water Technologies for your analytical needs.

Sincerely,

Siemens Water Technologies

Bruce Schertz
Lab Manager
Enviroscan Analytical™ Services

I certify that the data contained in this report has been generated and reviewed in accordance with the Siemens Water Technologies Quality Assurance Program. Exceptions, if any, are discussed in the sample narrative. Samples will be retained for 30 days from the date of this report, then disposed in an appropriate manner. Siemens Water Technologies Corp. reserves the right to return samples identified as hazardous. Release of this Final Report is authorized as verified by the following signature. The contents of this report apply to the sample(s) analyzed. No duplication of this report is allowed except in its entirety.

Reviewed by: Cindy K Voigt

Certifications:
Wisconsin 737053130
Minnesota 055-999-302
Illinois 100317

Siemens Water Technologies Corp.
301 West Military Road
Rothschild, WI 54474
Tel: 800-338-7226
Fax: 715-355-3221
www.siemens.com/enviroscan

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SAMPLE SUMMARY

Lab Id	Client Sample Id	Date/Time	Matrix
1005230-01	N-1	05/12/10 09:00	Soil
1005230-02	N-2	05/12/10 09:20	Soil
1005230-03	S-1	05/12/10 09:40	Soil
1005230-04	S-2	05/12/10 10:00	Soil

SIEMENS

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

PROJECT NO. : 34265-003 Murphy Oil Superior WI
REPORT NO. : 1005230
DATE REC'D: 05/14/10 09:00
REPORT DATE : 05/28/10 10:40
PREPARED BY : BMS

Attn: Jeff King

Sample ID: **N-1** Matrix: **Soil** Sample Date/Time: **05/12/10 9:00** Lab No. : **1005230-01**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.013	0.025	1		05/26/10	ALZ
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Benzene	ND	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Ethylbenzene	ND	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Gasoline Range Organics	ND	mg/kg dry	5.00	5.00	1		05/26/10	ALZ
m&p-Xylene	0.137	mg/kg dry	0.021	0.025	1		05/26/10	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		05/26/10	ALZ
o-Xylene	ND	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Toluene	0.077	mg/kg dry	0.017	0.025	1		05/26/10	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
1-Methylnaphthalene	ND	mg/kg dry	0.0409	0.133	10	SL	05/26/10	ALZ
2-Methylnaphthalene	ND	mg/kg dry	0.0454	0.155	10	SL	05/26/10	ALZ
Acenaphthene	ND	mg/kg dry	0.0520	0.177	10	SL	05/26/10	ALZ
Acenaphthylene	ND	mg/kg dry	0.0730	0.243	10	SL	05/26/10	ALZ
Anthracene	ND	mg/kg dry	0.0354	0.118	10	SL, S1H, S2H	05/26/10	ALZ
Benzo(a)anthracene	0.211	mg/kg dry	0.0454	0.155	10	SL, S1H, S2H	05/26/10	ALZ
Benzo(a)pyrene	0.237	mg/kg dry	0.0254	0.0852	10	SL, S1H, S2H	05/26/10	ALZ
Benzo(b)fluoranthene	0.243	mg/kg dry	0.0232	0.0774	10	SL, S1H, S2H, DUP	05/26/10	ALZ
Benzo(g,h,i)perylene	0.173	mg/kg dry	0.0442	0.144	10	SL, S1H	05/26/10	ALZ
Benzo(k)fluoranthene	0.117	mg/kg dry	0.0321	0.107	10	SL	05/26/10	ALZ
Chrysene	0.262	mg/kg dry	0.0254	0.0852	10	SL	05/26/10	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0299	0.0996	10	SL	05/26/10	ALZ
Fluoranthene	0.451	mg/kg dry	0.0288	0.0962	10	SL, S1H, S2H, DUP	05/26/10	ALZ
Fluorene	ND	mg/kg dry	0.0365	0.122	10	SL	05/26/10	ALZ
Indeno(1,2,3-cd)pyrene	0.215	mg/kg dry	0.0243	0.0808	10	SL, S1H	05/26/10	ALZ
Naphthalene	ND	mg/kg dry	0.0509	0.166	10	SL	05/26/10	ALZ
Phenanthrene	0.272	mg/kg dry	0.0454	0.148	10	SL, S1H, S2H, DUP	05/26/10	ALZ
Pyrene	0.472	mg/kg dry	0.0312	0.104	10	SL, S1H, S2H	05/26/10	ALZ
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
Diesel Range Organics	7.25	mg/kg dry	4.58	4.58	0.915	D2	05/26/10	ALZ

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Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

PROJECT NO. : 34265-003 Murphy Oil Superior WI
REPORT NO. : 1005230
DATE REC'D: 05/14/10 09:00
REPORT DATE : 05/28/10 10:40
PREPARED BY : BMS

Attn: Jeff King

Sample ID: **N-2** Matrix: **Soil** Sample Date/Time: **05/12/10 9:20** Lab No. : **1005230-02**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.164	mg/kg dry	0.013	0.025	1		05/26/10	ALZ
1,3,5-Trimethylbenzene	0.081	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Benzene	ND	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Ethylbenzene	0.107	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Gasoline Range Organics	ND	mg/kg dry	5.00	5.00	1		05/26/10	ALZ
m&p-Xylene	0.320	mg/kg dry	0.021	0.025	1		05/26/10	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		05/26/10	ALZ
o-Xylene	0.113	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Toluene	0.193	mg/kg dry	0.017	0.025	1		05/26/10	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
1-Methylnaphthalene	ND	mg/kg dry	0.0431	0.140	10		05/26/10	ALZ
2-Methylnaphthalene	ND	mg/kg dry	0.0478	0.163	10		05/26/10	ALZ
Acenaphthene	ND	mg/kg dry	0.0548	0.186	10		05/26/10	ALZ
Acenaphthylene	ND	mg/kg dry	0.0769	0.256	10		05/26/10	ALZ
Anthracene	ND	mg/kg dry	0.0373	0.125	10	SL	05/26/10	ALZ
Benzo(a)anthracene	0.242	mg/kg dry	0.0478	0.163	10	SL	05/26/10	ALZ
Benzo(a)pyrene	0.260	mg/kg dry	0.0268	0.0897	10	SL	05/26/10	ALZ
Benzo(b)fluoranthene	0.292	mg/kg dry	0.0245	0.0816	10	SL	05/26/10	ALZ
Benzo(g,h,i)perylene	0.234	mg/kg dry	0.0466	0.152	10	SL	05/26/10	ALZ
Benzo(k)fluoranthene	0.155	mg/kg dry	0.0338	0.113	10	SL	05/26/10	ALZ
Chrysene	0.140	mg/kg dry	0.0268	0.0897	10	SL	05/26/10	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0315	0.105	10	SL	05/26/10	ALZ
Fluoranthene	0.484	mg/kg dry	0.0303	0.101	10	SL	05/26/10	ALZ
Fluorene	ND	mg/kg dry	0.0385	0.128	10	SL	05/26/10	ALZ
Indeno(1,2,3-cd)pyrene	0.279	mg/kg dry	0.0256	0.0851	10	SL	05/26/10	ALZ
Naphthalene	ND	mg/kg dry	0.0536	0.175	10		05/26/10	ALZ
Phenanthrene	0.265	mg/kg dry	0.0478	0.156	10	SL	05/26/10	ALZ
Pyrene	0.452	mg/kg dry	0.0329	0.109	10	SL	05/26/10	ALZ
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
Diesel Range Organics	29.4	mg/kg dry	4.69	4.69	0.938	D2	05/26/10	ALZ

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Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

PROJECT NO. : 34265-003 Murphy Oil Superior WI
REPORT NO. : 1005230
DATE REC'D: 05/14/10 09:00
REPORT DATE : 05/28/10 10:40
PREPARED BY : BMS

Attn: Jeff King
Sample ID: **S-1** Matrix: **Soil** Sample Date/Time: **05/12/10 9:40** Lab No. : **1005230-03**

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.113	mg/kg dry	0.013	0.025	1		05/26/10	ALZ
1,3,5-Trimethylbenzene	0.066	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Benzene	0.063	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Ethylbenzene	0.087	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Gasoline Range Organics	ND	mg/kg dry	5.00	5.00	1		05/26/10	ALZ
m&p-Xylene	0.269	mg/kg dry	0.021	0.025	1		05/26/10	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		05/26/10	ALZ
o-Xylene	0.163	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Toluene	0.215	mg/kg dry	0.017	0.025	1		05/26/10	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
1-Methylnaphthalene	ND	mg/kg dry	0.431	1.40	100	SH	05/26/10	ALZ
2-Methylnaphthalene	ND	mg/kg dry	0.478	1.63	100	SH	05/26/10	ALZ
Acenaphthene	0.738	mg/kg dry	0.548	1.86	100	SH, J	05/26/10	ALZ
Acenaphthylene	ND	mg/kg dry	0.769	2.56	100	SH	05/26/10	ALZ
Anthracene	2.57	mg/kg dry	0.373	1.25	100		05/26/10	ALZ
Benzo(a)anthracene	2.61	mg/kg dry	0.478	1.63	100		05/26/10	ALZ
Benzo(a)pyrene	1.69	mg/kg dry	0.268	0.897	100		05/26/10	ALZ
Benzo(b)fluoranthene	1.64	mg/kg dry	0.245	0.816	100		05/26/10	ALZ
Benzo(g,h,i)perylene	0.736	mg/kg dry	0.466	1.52	100	J	05/26/10	ALZ
Benzo(k)fluoranthene	0.991	mg/kg dry	0.338	1.13	100	J	05/26/10	ALZ
Chrysene	1.89	mg/kg dry	0.268	0.897	100		05/26/10	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.315	1.05	100		05/26/10	ALZ
Fluoranthene	7.06	mg/kg dry	0.303	1.01	100		05/26/10	ALZ
Fluorene	ND	mg/kg dry	0.385	1.28	100		05/26/10	ALZ
Indeno(1,2,3-cd)pyrene	0.822	mg/kg dry	0.256	0.851	100	J	05/26/10	ALZ
Naphthalene	ND	mg/kg dry	0.536	1.75	100	SH	05/26/10	ALZ
Phenanthrene	7.87	mg/kg dry	0.478	1.56	100		05/26/10	ALZ
Pyrene	7.18	mg/kg dry	0.329	1.09	100		05/26/10	ALZ
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
Diesel Range Organics	208	mg/kg dry	48.9	48.9	9.78	D2	05/25/10	ALZ

SIEMENS

Gannett Fleming, Inc.
8025 Excelsior Drive
Madison, WI 53717

PROJECT NO. : 34265-003 Murphy Oil Superior WI
REPORT NO. : 1005230
DATE REC'D: 05/14/10 09:00
REPORT DATE : 05/28/10 10:40
PREPARED BY : BMS

Attn: Jeff King

Sample ID: S-2 Matrix: Soil Sample Date/Time: 05/12/10 10:00 Lab No. : 1005230-04

	Results	Units	LOD	LOQ	Dilution Factor	Qualifiers	Date Analyzed	Analyst
EPA 8021B/ WI DNR GRO								
1,2,4-Trimethylbenzene	0.079	mg/kg dry	0.013	0.025	1		05/26/10	ALZ
1,3,5-Trimethylbenzene	0.056	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Benzene	ND	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Ethylbenzene	0.054	mg/kg dry	0.018	0.025	1		05/26/10	ALZ
Gasoline Range Organics	ND	mg/kg dry	5.00	5.00	1		05/26/10	ALZ
m&p-Xylene	0.164	mg/kg dry	0.021	0.025	1		05/26/10	ALZ
Methyl Tert Butyl Ether	ND	mg/kg dry	0.011	0.025	1		05/26/10	ALZ
o-Xylene	0.089	mg/kg dry	0.016	0.025	1		05/26/10	ALZ
Toluene	0.100	mg/kg dry	0.017	0.025	1		05/26/10	ALZ
EPA 8310								
Prep Method: Method 3550B Ultrasonic Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
1-Methylnaphthalene	ND	mg/kg dry	0.0415	0.135	10		05/26/10	ALZ
2-Methylnaphthalene	ND	mg/kg dry	0.0460	0.157	10		05/26/10	ALZ
Acenaphthene	ND	mg/kg dry	0.0527	0.180	10		05/26/10	ALZ
Acenaphthylene	ND	mg/kg dry	0.0741	0.247	10		05/26/10	ALZ
Anthracene	ND	mg/kg dry	0.0359	0.120	10		05/26/10	ALZ
Benzo(a)anthracene	0.241	mg/kg dry	0.0460	0.157	10		05/26/10	ALZ
Benzo(a)pyrene	0.258	mg/kg dry	0.0258	0.0864	10		05/26/10	ALZ
Benzo(b)fluoranthene	0.311	mg/kg dry	0.0236	0.0786	10		05/26/10	ALZ
Benzo(g,h,i)perylene	0.155	mg/kg dry	0.0449	0.146	10		05/26/10	ALZ
Benzo(k)fluoranthene	0.164	mg/kg dry	0.0325	0.109	10		05/26/10	ALZ
Chrysene	0.170	mg/kg dry	0.0258	0.0864	10		05/26/10	ALZ
Dibenzo(a,h)anthracene	ND	mg/kg dry	0.0303	0.101	10		05/26/10	ALZ
Fluoranthene	0.589	mg/kg dry	0.0292	0.0976	10		05/26/10	ALZ
Fluorene	ND	mg/kg dry	0.0370	0.123	10		05/26/10	ALZ
Indeno(1,2,3-cd)pyrene	0.0708	mg/kg dry	0.0247	0.0819	10	J	05/26/10	ALZ
Naphthalene	ND	mg/kg dry	0.0516	0.168	10		05/26/10	ALZ
Phenanthrene	0.443	mg/kg dry	0.0460	0.150	10		05/26/10	ALZ
Pyrene	0.515	mg/kg dry	0.0316	0.105	10		05/26/10	ALZ
WI DNR DRO								
Prep Method: WI DNR Soil Extraction	*By: JEG*					*Date Prepared:*	*05/17/10*	
Diesel Range Organics	21.2	mg/kg dry	4.48	4.48	0.896	D2	05/26/10	ALZ

SIEMENS

Qualifier Descriptions

SL	Surrogate recovery was low. Result for sample may be biased low.
SH	Surrogate recovery was high. Result for sample may be biased high.
S2H	Second sample matrix spike recovery was high.
S1H	First sample matrix spike recovery was high.
J	Estimated concentration below laboratory quantitation level.
DUP	Result of duplicate analysis in this quality assurance batch exceeds the limits for precision.
D2	The chromatogram is not characteristic for diesel. It has the characteristics of a product which has significant peaks within the DRO window.

Definitions

LOD = Limit of Detection (Dilution Corrected)
LOQ = Limit of Quanitation (Dilution Corrected)
Reporting Limit = LOQ (Dilution Corrected)
ND = Not Detected
COMP = Complete
SUBCON = Subcontracted analysis
mv = millivolts
pci/L = picocuries per Liter
mL/L = milliliters per Liter
mg = milligram

When the word "dry" follows the units on the result page the sample results are dry weight corrected.

LODs and LOQs are dry weight corrected for all soils except WI GRO and EPA 8021methanol and WI DNR methylene chloride preserved soils.

ug/l = Micrograms per Liter = parts per billion (ppb)
ug/kg = Micrograms per kilogram = parts per billion (ppb)
mg/l = Milligrams per ilter = parts per million (ppm)
mg/kg = Milligrams per kilogram = parts per million (ppm)
NOT PRES = Not Present
ppth = Parts per thousand
* = Result outside established limits.
mg/m3 = Milligrams per meter cubed
ng/L = Nanograms per Liter = Parts per trillion(ppt)
> = Greater Than

Methanol Soils for WI GRO and EPA 8021 are reported to the LOQ.

SIEMENS

Company Name	Project
Gannett Fleming	Murphy Oil, Superior, WI 34265-003
Report Mailing Address	**Contact Name, Phone, Fax, Email**
8055 Excelsior Dr Jeff King Madison, WI 53717	608-836-1500 JKing@gfnet.com Jeff King
Invoice Address	**Purchase Order #** / **Invoice Contact and Phone No.**
Stinson Ave Liz Lundmark Superior, WI	Liz Lundmark

Matrix: Drinking Water Groundwater Wastewater (Soil/Solid) Other: _____

Wis. PECFA Project subject to U&C? Yes (No)

For Compliance Monitoring? Yes No State: _____
(If Yes, please specify Agency or Regulation) Agency/Reg.: _____

Turnaround Request: (X) Normal (10 Bus. Days)
[ ] Rush (Must be pre-approved by Lab and is subject to surchages)
Date Needed: _____

WO No. 100528

Lab Use Only	Sample Date	Sample Time	No. of Containers Comp	No. of Containers Grab	Sample ID	Analyses Requested: Grab PVOCs	DRO	PAHs					Comments
-1	5-12-10	9:00		3	N-1	X	X	X					1-2oz w/ Meoh, 1-2oz NP, 1-4oz jar
-2		9:20		3	N-2	X	X	X					
-3		9:40		3	S-1	X	X	X					
-4	↓	10:00		3	S-2	X	X	X					

Lab Use Only

Delivered by	Walk-in		(Courier)
Ship. Cont. Ok?	(Y)	N	NA
Samples Leaking?	Y	(N)	NA
Seals OK?	(Y)	N	NA
Rec'd on Ice?	(Y)	N	NA

Sample Receiving Comments: 3.3

Chain of Custody Record

Relinquished By:	Date	Time	Received By:
1	5-13-10	2:30	
	5-14-10	0900	

LABORATORY'S QUALITY VERIFICATION STATEMENT

Laboratory must provide a signed copy of this form with each deliverable specified in the Work Order or the deliverable will not be accepted. Laboratory must provide Gannett Fleming with a true copy of its internal QA/QC review and approval forms related to the deliverable.

This form must be signed by the Laboratory's Quality Control/Quality Assurance Officer

Project Name: Murphy Oil

Gannett Fleming Project Number: 34265-003

Deliverable Description: Analytical Report

I, Cindy Varga, warrant and represent that the project deliverable described above and attached to this form was developed in accordance with the project scope of work and that all elements relating to the quality of the deliverable were verified in accordance with the requirements of my firm's internal quality management/quality assurance system. This deliverable satisfies all requirements of our Contract with Gannett Fleming.

Signature: Cindy Varga **Date:** 6/11/10
(by Laboratory's QC/QA Officer)

Laboratory: Siemens Water Technologies

'Deliverable' shall mean all aspects of design including, without limitation, drawings, calculations, maps, materials and specifications, reports, data bases, logs and other information developed from wells, borings and cores, laboratory data, materials schedules, instrument calibration data and all other items developed, prepared and delivered to Gannett Fleming by Contractor as specified in the Scope of Work in any media.

bw 10.2.09