



Roy F. Weston, Inc.
Suite 500
750 East Bunker Court
Vernon Hills, IL 60061-1450
847-918-4000 • Fax 847-918-4055
www.rfweston.com

*Received
09/19/2000*

COPY

13 September 2000

Mr. Russell D. Hart (HSRW-6J)
Remedial Project Manager
U. S. Environmental Protection Agency
Region V
77 West Jackson Boulevard
Chicago, IL 60604

Work Order No. 02687-007-003

Re: Quarterly Groundwater Monitoring Report, Second Quarter 2000
Moss-American Site, Milwaukee, Wisconsin

Dear Mr. Hart:

On behalf of the Kerr-McGee Chemical LLC (KMC), Roy F. Weston, Inc. (WESTON®) is submitting this report summarizing the results of the second quarter 2000 groundwater monitoring event completed at the above referenced project in June 2000. A description of the groundwater monitoring program and the results obtained during this monitoring period are presented in the following sections. Also included is a discussion of the laboratory analytical results that have exceeded the Preventive Action Limits (PAL) and Enforcement Standards (ES) promulgated by Wisconsin Department of Natural Resources (WDNR) in NR140.10, Public Health Groundwater Quality Standards.

The groundwater analytical results reported for the second quarter (June 2000) reflect conditions at the site where the funnel and gate groundwater treatment system including the installation of the containment performance wells and treatment-gate performance wells are already in place. This quarterly groundwater monitoring report presents the results of the shallow plume monitoring wells and the newly installed eight shallow containment performance wells.

1.0 BACKGROUND

In accordance with paragraph 4a of the Remedial Design and Remedial Action Statement of Work (RD/RA SOW), KMC is required to implement a groundwater monitoring program capable of detecting changes in chemical concentrations in the groundwater. As previously agreed, the monitoring network includes 23 groundwater monitoring wells—MW-3S, MW-3I, MW-4S, MW-4I, MW-5S, MW-6S, MW-7S, MW-7I, MW-8S, MW-8I, MW-9S, MW-9I, MW-10S, MW-13S, MW-20S, MW-20I, MW-25S, MW-26S, MW-27S, MW-28S, MW-29S, TW-05, and TW-09. Additionally, KMC is also required to extend the implementation of the above referenced groundwater monitoring program by sampling the eight newly installed containment performance shallow monitoring wells on a quarterly basis. These wells include MW-30S, MW-





Mr. Russell D. Hart
U.S. EPA

-2-

13 September 2000

31S, MW-32S, MW-33S, MW-34S, MW-35S, MW-36S and MW-37S. These wells together form the new shallow monitoring well network.

In accordance with paragraph 4a (i) of the RD/RA SOW, the field measurement and analysis of groundwater samples includes groundwater elevation, pH, temperature, turbidity, specific conductance, redox potential, dissolved oxygen. Laboratory analyses include BTEX compounds (benzene, toluene, ethylbenzene, and xylene) and polynuclear aromatic hydrocarbon (PAH) compounds (acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluorene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene).

2.0 GROUNDWATER MONITORING RESULTS

The second quarter 2000 groundwater monitoring event at the Moss-American site was completed between 26 June and 30 June 2000. Tasks completed during the field effort for this event included the collection of groundwater elevation data from all the shallow monitoring wells referenced above. Following groundwater elevation data measurements, groundwater samples were collected from all the shallow monitoring wells with the exception of monitoring wells TW-09 and MW-8S, since these wells were removed during the installation of the funnel and gate groundwater treatment system. The results of the groundwater samples that were collected and analyzed from the shallow wells are described in the following subsections.

2.1 GROUNDWATER ELEVATION MEASUREMENTS

The depth to water was measured in each of the monitoring wells mentioned in Section 1.0 of this report. The measurements were conducted on 26 June 2000, prior to the beginning of groundwater sampling. These measurements were used to determine the elevation of the potentiometric surface of the shallow groundwater-bearing zone underlying the site. The water level measurements and resulting elevations are presented in Table 1. Figure 1 presents a groundwater elevation contour map that shows the potentiometric surface of the shallow groundwater-bearing zone. An evaluation of these results is presented in the following paragraphs.

As Figure 1 shows, the groundwater within the shallow groundwater-bearing zone generally flows northeastward toward the Little Menomonee River. In the topographically higher, western portion of the site, the horizontal hydraulic gradient of the potentiometric surface is relatively



Mr. Russell D. Hart
U.S. EPA

-3-

13 September 2000

steep at approximately 0.0219 feet per foot (ft/ft). The gradient flattens near the river, as does the ground surface, with an average of approximately 0.0052 ft/ft.

The average velocity of groundwater flow within the shallow water-bearing zone can be calculated using the hydraulic gradients presented above, the average hydraulic conductivity used for the shallow water-bearing zone (1.2 feet per day [ft/day]), and the assumed effective porosity of 30 percent. In the western portion of the site the groundwater flow velocity is calculated to be approximately 0.087 ft/day. Near the river, the velocity of groundwater flow is calculated to be approximately 0.021 ft/day.

2.2 GROUNDWATER SAMPLE ANALYSES RESULTS

Groundwater samples were collected from a total of twenty-three shallow monitoring wells screened within the shallow groundwater-bearing zone. These wells include MW-3S, MW-4S, MW-5S, MW-6S, MW-7S, MW-9S, MW-10S, MW-13S, MW-20S, MW-25S, MW-26S, MW-27S, MW-28S, MW-29S and TW-05 and eight containment performance monitoring wells - MW-30S, MW-31S, MW-32S, MW-33S, MW-34S, MW-35S, MW-36S and MW-37S. In addition, for quality assurance/quality control (QA/QC) purposes, two sample duplicates, two matrix spike/matrix spike duplicates (MS/MSDs) and two field blanks (identified by a FB prefix) were collected. Trip blanks accompanied each cooler of sample bottles from the laboratory to the site and were shipped back to the laboratory within each cooler full of samples.

Each groundwater sample was measured for the field parameters discussed in Section 1 and analyzed for BTEX and PAH compounds. The results of these measurements and analyses are discussed in the following subsections.

2.2.1 Field-Measured Parameters

The groundwater samples were measured in the field for pH, specific conductance, temperature, redox potential, dissolved oxygen, and turbidity. The results of these measurements are provided in Table 2. As shown in Table 2, the groundwater pH ranged from 6.6 to 7.5 standard pH units (S.U.). The specific conductivity ranged from 0.25 to 0.66 mΩ/cm. Groundwater temperatures ranged from 11.8 to 18.6° C. The redox potentials of the groundwater ranged from -45 to 219 mV. Dissolved oxygen levels ranged from 1.1 to 7.9 mg/L. Turbidity ranged from 1.5 to 1,298 nephelometric turbidity units (NTU).

2.2.2 Laboratory Analyses

Each groundwater sample collected during the second quarter 2000 monitoring period was analyzed for BTEX and PAH compounds. The results of these analyses are presented in Table 3. Table 3 also indicates those parameters that were detected at concentrations that exceed their respective PALs (shown as bold values). Parameters with concentrations exceeding both PALs and ESs are presented as bold and shaded values in Table 3. Groundwater sampling results during this quarter were also compared to the ES and PAL standards provided by the WDNR for anthracene, fluoranthene, pyrene, chrysene and benzo(b)fluoranthene. These results are summarized in the following paragraphs. The laboratory reports are presented in Attachment A.

Groundwater Sample Results

As Table 3 shows, primarily benzene, naphthalene, fluorene, pyrene, chrysene, benzo(b)fluoranthene and benzo(a)pyrene were detected at concentrations that exceed their respective PALs and/or ES in the groundwater samples collected from the shallow monitoring well network. The results are as follows:

PAL Exceedances:

- Benzene was detected at concentrations exceeding the WDNR PAL of 0.5 µg/L in groundwater samples collected from monitoring wells MW-4S, MW-7S and MW-34S.
- Naphthalene was detected at concentrations exceeding the WDNR PAL of 8 µg/L in groundwater samples collected from monitoring wells MW-4S, MW-7S, MW-32S, MW-33S, MW-34S and MW-35S.
- Fluorene was detected at concentrations exceeding WDNR PAL of 80 µg/L in groundwater sample collected from MW-4S and MW-34S.
- Pyrene was detected at concentrations exceeding WDNR PAL of 50 µg/L in groundwater sample collected from MW-4S.
- Chrysene was detected at concentrations exceeding WDNR PAL of 0.02 µg/L in groundwater sample collected from MW-4S, TW-05 and MW-35S.



Mr. Russell D. Hart
U.S. EPA

-5-

13 September 2000

- Benzo(b)fluoranthene was detected at concentrations exceeding the WDNR PAL of 0.02 µg/L in groundwater samples collected from monitoring wells MW-4S, TW-05 and MW-35S.
- Benzo(a)pyrene was detected at concentrations exceeding the WDNR PAL of 0.02 µg/L in groundwater samples collected from monitoring wells MW-4S, TW-05 and MW-35S.

ES Exceedances:

- Benzene was detected at concentrations exceeding the WDNR PAL of 5 µg/L in groundwater sample MW-34S.
- Naphthalene was detected at concentrations exceeding the WDNR ES of 40 µg/L in groundwater samples collected from monitoring wells MW-4S, MW-7S, MW-32S, MW-33S, MW-34S and MW-35S.
- Chrysene was detected at concentrations exceeding WDNR PAL of 0.2 µg/L in groundwater sample collected from MW-4S and TW-05.
- Benzo(b)fluoranthene was detected at concentrations exceeding the WDNR PAL of 0.2 µg/L in groundwater samples collected from monitoring wells MW-4S and TW-05.
- Benzo(a)pyrene was detected at concentrations exceeding the WDNR ES of 0.2 µg/L in groundwater samples collected from monitoring wells MW-4S and TW-05.

For the most part, the detected plume boundary is an area encompassing the three shallow monitoring wells (MW-4S, MW-7S and TW-05) with the wells MW-32S, MW-33S, MW-34S and MW-35S included during this quarter. Based on these detected concentrations, the width of the contaminant plume generally indicates an easterly trend as indicated in Figure 1 as well as during the previous nine quarterly groundwater-sampling events.

A summary of the concentration of contaminants at wells that have regularly exceeded PALs and/or ES during the last nine quarters are presented in Table 4. Levels of naphthalene, fluorene, and benzo(a)pyrene fluctuate over wide ranges in these wells without a common pattern. However, these constituents have shown a more consistent decreasing trend during the last two



Mr. Russell D. Hart
U.S. EPA

-6-

13 September 2000

quarters in monitoring wells MW-4S, MW-7S and TW-05. A more accurate trend and performance may be illustrated as additional data for the containment performance wells (MW-30S through MW-37S) becomes available during the future quarterly groundwater sampling events.

If you have any questions or require additional information, please do not hesitate to call me at (847) 918-4142.

Very truly yours,

ROY F. WESTON, INC.

Thomas P. Graan, Ph.D.
Principal Project Manager

TPG/sk

Attachments

cc: G. Edelstein, WDNR
B. Felix, WDNR

Table 1

**Groundwater Elevation Measurements
Shallow Monitoring Well Network
Kerr-McGee - Moss American Site
Milwaukee, Wisconsin
Second Quarter 2000**

Well ID	Ground Elevation	TOC Elevation	Depth to Water	GW Elevation	Product Thickness
MW-3S	729.00	731.50	7.34	724.16	ND
MW-4S	731.00	732.86	4.92	727.94	ND
MW-5S	723.00	724.70	5.10	719.60	ND
MW-6S	727.00	724.28	3.68	720.60	ND
MW-7S	720.00	721.70	4.90	716.80	ND
MW-9S	720.00	721.71	7.01	714.70	ND
MW-10S	723.00	726.58	7.48	719.10	ND
MW-13S	737.00	738.68	3.39	735.29	ND
MW-20S	716.00	719.94	NM	NM	ND
MW-25S	736.83	739.24	3.61	735.63	ND
MW-26S	732.31	731.66	3.65	728.01	ND
MW-27S	720.59	723.15	5.14	718.01	ND
MW-28S	720.04	722.65	4.70	717.95	ND
MW-29S	720.01	722.39	4.91	717.48	ND
TW-05	721.76	724.16	2.81	721.35	ND
MW-30S	724.5	727.19	4.26	722.93	ND
MW-31S	723.8	726.35	2.07	724.28	ND
MW-32S	719.6	722.62	5.83	716.79	ND
MW-33S	719.1	721.69	5.29	716.4	ND
MW-34S	718.6	721.42	4.84	716.58	1/16"
MW-35S	718.9	721.54	4.6	716.94	ND
MW-36S	720.2	723.09	4.28	718.81	ND
MW-37S	720.5	723.13	NM	NM	ND

Note: All values in feet

TOC = Top of the casing

GW = Groundwater

NM = Not measured

ND = Not detected

All elevation measurements are with respect to Mean Sea Level (MSL)

Table 2

Field-Measured Parameters – Shallow Monitoring Wells
 Kerr-McGee – Moss American Site
 Milwaukee, Wisconsin
 Second Quarter 2000

Well Number	pH (Standard Units)	Specific Conductance (mΩ/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
MW-3S	7.2	0.59	15.1	213	3.75	458
MW-4S	7.5	0.60	13.4	37	5.25	38
MW-5S	6.9	0.38	12.9	156	1.2	1145
MW-6S	7.6	0.40	11.8	162	7.9	877
MW-7S	6.8	0.28	13.2	52	0.9	119
MW-9S	6.6	0.55	13.8	84	1.2	846
MW-10S	6.8	0.38	15.5	219	1.8	979
MW-13S	7.0	0.54	16.7	180	2.0	252
MW-20S	6.8	0.66	18.6	-20	NM	1.50
MW-25S	7.1	0.43	14.2	216	1.6	365
MW-26S	7.0	0.46	14.7	215	1.5	1183
MW-27S	6.9	0.54	15.1	27	4.1	908
MW-28S	7.1	0.46	13.1	57	2.3	893
MW-29S	7.0	0.48	14.2	160	3.6	760
TW-05	6.9	0.48	14.3	66	1.6	170

Well Number	pH (Standard Units)	Specific Conductance (mΩ/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
MW-30S	6.8	0.51	14.2	183	1.6	1298
MW-31S	7.2	0.42	14.7	196	4.0	918
MW-32S	6.7	0.45	13.2	-45	1.25	521
MW-33S	6.8	0.53	12.2	-18	1.1	446
MW-34S	NM	NM	NM	NM	NM	NM
MW-35S	7.0	0.36	14.6	48	1.6	419
MW-36S	7.5	0.34	13.8	168	7.5	983
MW-37S	7.0	0.25	11.8	96	2.5	140

S - Shallow Well
 NM - Not Measured
 TW - Temporary Well (Shallow)

Table 3

**Groundwater Sample Analytical Results
Plume Monitoring Wells
Kerr McGee - Moss American Site
Milwaukee, Wisconsin
Second Quarter 2000**

Sample ID:	MW-3S-10		MW-4S-10		MW-5S-10		MW-6S-10		MW-7S-10		WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
Sample Date:	6/30/00		6/30/00		6/30/00		6/29/00		6/28/00			
Units of Measure:	ug/L		ug/L		ug/L		ug/L		ug/L			
Parameters												
VOCs												
Benzene	0.2	U	3.4		0.2	U	0.2	U	4.0	J	0.5	5
Toluene	0.2	U	6.5		0.2	U	0.2	U	2.0	U	68.6	343
Ethylbenzene	0.2	U	9.8		0.2	U	0.2	U	19		140	700
Total Xylenes	0.6	U	19		0.6	U	0.6	U	52		124	620
PAHs												
Naphthalene	0.79	U	364	J	0.82	U	0.79	U	4260		8.0	40
Acenaphthalylene	0.79	U	84	J	0.82	U	0.79	U	150		NA	NA
Acenaphthene	0.79	U	520		0.82	U	0.79	U	79		NA	NA
Fluorene	0.17	U	223		0.17	U	0.17	U	12.8		80	400
Phenanthrene	0.069	U	7.2	J	0.072	U	0.069	U	0.38		NA	NA
Anthracene	0.044	J	46.4		0.032	J	0.066	J	0.031	U	600	3,000
Fluoranthene	0.03	U	63.1		0.031	U	0.032	J	0.031	U	80	400
Pyrene	0.17	U	51		0.17	U	0.17	U	0.18	U	50	250
Benzo(a)anthracene	0.02	U	6.4		0.021	U	0.02	U	0.021	U	NA	NA
Chrysene	0.059	U	3.0	J	0.062	U	0.059	U	0.062	U	0.02	0.2
Benzo(b)fluoranthene	0.037	U	1.9	J	0.039	U	0.037	U	0.039	U	0.02	0.2
Benzo(k)fluoranthene	0.0099	U	1.01	J	0.01	U	0.0098	U	0.01	U	NA	NA
Benzo(a)pyrene	0.02	U	1.7	J	0.021	U	0.02	U	0.021	U	0.02	0.2
Dibenzo(a,h)anthracene	0.03	U	1.5	U	0.031	U	0.03	U	0.031	U	NA	NA
Benzo(g,h,i)perylene	0.099	U	4.9	U	0.1	U	0.098	U	0.1	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.066	U	3.3	U	0.069	U	0.066	U	0.07	U	NA	NA

VOC - Volatile Organic Compound.

PAH - Polynuclear Aromatic Hydrocarbon.

Bold values indicate concentration exceeding PAL

U - Indicates constituent not detected

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit. ES = Enforcement Standard (WDNR)

NA - PAL or ES not available for this parameter

Bold and shaded values indicate concentration exceeding PAL and ES

J - Indicates estimated concentration

Table 3 (Cont.)

**Groundwater Sample Analytical Results
Plume Monitoring Wells
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin**

Sample ID:	MW-9S-10		MW-10S-10		MW-13S-10		MW-20S-10		MW-25S-10		MW-26S-10		WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
Sample Date:	6/29/00		6/29/00		6/30/00		7/7/00		6/30/00		6/30/00			
Units of Measure:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L			
Parameters														
VOCs														
Benzene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.5	5
Toluene	0.2	U	7.9		0.2	U	0.2	U	0.2	U	0.2	U	68.6	343
Ethylbenzene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	140	700
Total Xylenes	0.6	U	0.6	U	3.0	U	0.6	U	0.6	U	0.6	U	124	620
PAHs														
Naphthalene	0.81	U	0.85	U	0.8	U	0.81	U	0.8	U	0.85	J	8.0	40
Acenaphthalylene	0.81	U	0.85	U	0.8	U	0.81	U	0.8	U	0.81	U	NA	NA
Acenaphthene	0.81	U	0.85	U	0.8	U	0.81	U	0.8	U	0.81	U	NA	NA
Fluorene	0.17	U	0.18	U	0.17	U	0.17	U	0.17	U	0.17	U	80	400
Phenanthrene	0.071	U	0.075	U	0.07	U	0.071	U	0.07	U	0.071	U	NA	NA
Anthracene	0.05	J	0.032	J	0.04	J	0.03	U	0.03	U	0.03	U	600	3,000
Fluoranthene	0.03	U	0.032	U	0.03	U	0.03	U	0.03	U	0.03	U	80	400
Pyrene	0.17	U	0.18	U	0.17	U	0.17	U	0.17	U	0.17	U	50	250
Benzo(a)anthracene	0.02	U	0.021	U	0.02	U	0.02	U	0.02	U	0.02	U	NA	NA
Chrysene	0.061	U	0.064	U	0.06	U	0.06	U	0.06	U	0.061	U	0.02	0.2
Benzo(b)fluoranthene	0.038	U	0.041	U	0.038	U	0.038	U	0.038	U	0.038	U	0.02	0.2
Benzo(k)fluoranthene	0.01	U	0.011	U	0.01	U	0.01	U	0.01	U	0.01	U	NA	NA
Benzo(a)pyrene	0.02	U	0.021	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	0.2
Dibenzo(a,h)anthracene	0.03	U	0.032	U	0.03	U	0.03	U	0.03	U	0.03	U	NA	NA
Benzo(g,h,i)perylene	0.1	U	0.11	U	0.10	U	0.1	U	0.1	U	0.1	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.068	U	0.071	U	0.067	U	0.068	U	0.067	U	0.068	U	NA	NA

VOC - Volatile Organic Compound.

PAH - Polynuclear Aromatic Hydrocarbon.

Bold values indicate concentration exceeding PAL

U - Indicates constituent not detected

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.

NA - PAL or ES not available for this parameter.

Bold and shaded values indicate concentration exceeding PAL and ES

J - Indicates estimated concentration

ES = Enforcement Standard (WDNR)

Field Duplicate Samples for MW-9S and MW-25S indicated non-detectable results.

Table 3 (Cont.)

**Groundwater Sample Analytical Results
Plume Monitoring Wells
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin**

Sample ID:	MW-27S-10		MW-28S-10		MW-29S-10		TW-05-10		WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater		Groundwater		Groundwater		Groundwater			
Sample Date:	6/29/00		6/29/00		6/29/00		6/29/00			
Units of Measure:	ug/L		ug/L		ug/L		ug/L			
Parameters										
VOCs										
Benzene	0.2	U	0.2	U	0.2	U	0.2	U	0.5	5
Toluene	0.2	U	0.2	U	0.2	U	0.2	U	68.6	343
Ethylbenzene	0.2	U	0.2	U	0.2	U	0.2	U	140	700
Total Xylenes	0.6	U	0.6	U	0.6	U	0.6	U	124	620
PAHs										
Naphthalene	0.78	U	0.85	U	0.83	U	6.96	J	8.0	40
Acenaphthalylene	0.78	U	0.85	U	0.83	U	10.1		NA	NA
Acenaphthene	2.2	J	0.85	U	0.83	U	75		NA	NA
Fluorene	1.48		0.18	U	0.18	U	53.2		80	400
Phenanthrene	0.082	J	0.074	U	0.072	U	3.2		NA	NA
Anthracene	0.53		0.063	J	0.031	U	16.5		600	3,000
Fluoranthene	0.37		0.032	U	0.031	U	12.6		80	400
Pyrene	0.30	J	0.18	U	0.18	U	9.97		50	250
Benzo(a)anthracene	0.024	J	0.021	U	0.021	U	0.799		NA	NA
Chrysene	0.059	U	0.064	U	0.062	U	0.64		0.02	0.2
Benzo(b)fluoranthene	0.037	U	0.04	U	0.039	U	0.348		0.02	0.2
Benzo(k)fluoranthene	0.0098	U	0.011	U	0.01	U	0.206		NA	NA
Benzo(a)pyrene	0.02	U	0.021	U	0.021	U	0.361		0.02	0.2
Dibenzo(a,h)anthracene	0.029	U	0.032	U	0.031	U	0.13	J	NA	NA
Benzo(g,h,i)perylene	0.098	U	0.11	U	0.1	U	0.2	J	NA	NA
Indeno(1,2,3-cd)pyrene	0.066	U	0.071	U	0.069	U	0.262	J	NA	NA

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit. ES = Enforcement Standard (WDNR)

NA - PAL or ES not available for this parameter.

Bold values indicate concentration exceeding PAL

Bold and shaded values indicate concentration exceeding PAL and ES

U - Indicates constituent not detected

J - Indicates estimated concentration

Table 3 (Cont.)

Groundwater Sample Analytical Results (Field Blanks)
Kerr McGee - Moss American Site
Milwaukee, Wisconsin
Second Quarter 2000

Sample ID:	FB-01-10		FB-02-10		FB-03-10		FB-04-10		FB-05-10		WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
Sample Date:	6/27/00		6/27/00		6/29/00		6/29/00		6/29/00			
Units of Measure:	ug/L		ug/L		ug/L		ug/L		ug/L			
Parameters												
VOCs												
Benzene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.5	5
Toluene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	68.6	343
Ethylbenzene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	140	700
Total Xylenes	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	124	620
PAHs												
Naphthalene	0.86	U	0.84	U	0.83	U	0.87	U	1.0	U	8.0	40
Acenaphthalylene	0.86	U	0.84	U	0.83	U	0.87	U	1.0	U	NA	NA
Acenaphthene	0.86	U	0.84	U	0.83	U	0.87	U	1.0	U	NA	NA
Fluorene	0.18	U	0.18	U	0.18	U	0.18	U	0.21	U	80	400
Phenanthrene	0.075	U	0.073	U	0.072	U	0.076	U	0.086	U	NA	NA
Anthracene	0.032	U	0.031	U	0.031	U	0.032	U	0.037	U	600	3,000
Fluoranthene	0.032	U	0.031	U	0.031	U	0.032	U	0.037	U	80	400
Pyrene	0.18	U	0.18	U	0.18	U	0.18	U	0.21	U	50	250
Benzo(a)anthracene	0.022	U	0.021	U	0.021	U	0.022	U	0.024	U	NA	NA
Chrysene	0.065	U	0.063	U	0.062	U	0.065	U	0.073	U	0.02	0.2
Benzo(b)fluoranthene	0.041	U	0.04	U	0.039	U	0.041	U	0.047	U	0.02	0.2
Benzo(k)fluoranthene	0.011	U	0.01	U	0.01	U	0.011	U	0.012	U	NA	NA
Benzo(a)pyrene	0.022	U	0.021	U	0.021	U	0.022	U	0.024	U	0.02	0.2
Dibenzo(a,h)anthracene	0.032	U	0.031	U	0.031	U	0.032	U	0.037	U	NA	NA
Benzo(g,h,i)perylene	0.11	U	0.1	U	0.1	U	0.11	U	0.12	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.072	U	0.07	U	0.069	U	0.073	U	0.082	U	NA	NA

VOC - Volatile Organic Compound.

PAH - Polynuclear Aromatic Hydrocarbon.

Bold Values indicate concentrations exceeding PAL.

U - Indicates constituent not detected

PAL - Wisconsin Department of Natural Resources Preventative Action Limit.

NA - PAL not established for this parameter.

Bold and shaded values indicate concentrations exceeding both PAL and ES.

J - Indicates estimated concentration

Table 3 (Cont.)

Groundwater Sample Analytical Results
Field Duplicates
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin

Sample ID:			TG6-2-10-DP	TG6-3-10-DP	MW-25S-10-DP	WDNR	WDNR			
Sample Matrix:			Groundwater	Groundwater	Groundwater	PAL	ES			
Sample Date:			6/27/00	6/27/00	6/30/00	ug/L	ug/L			
Units of Measure:			ug/L	ug/L	ug/L					
Parameters										
VOCs										
Benzene			0.2	U	0.2	U	0.2	U	0.5	5
Toluene			0.2	U	0.2	U	0.2	U	68.6	343
Ethylbenzene			0.2	U	0.2	U	0.2	U	140	700
Total Xylenes			0.6	U	0.6	U	0.6	U	124	620
PAHs										
Naphthalene			0.8	U	0.8	U	0.81	U	8.0	40
Acenaphthalylene			0.8	U	0.8	U	0.81	U	NA	NA
Acenaphthene			0.8	U	0.8	U	0.81	U	NA	NA
Fluorene			0.17	U	0.17	U	0.17	U	80	400
Phenanthrene			0.31		0.07	U	0.071	U	NA	NA
Anthracene			0.24		0.056	J	0.03	U	600	3,000
Fluoranthene			0.58		0.047	J	0.03	U	80	400
Pyrene			0.63	J	0.17	U	0.17	U	50	250
Benzo(a)anthracene			0.171		0.02	U	0.02	U	NA	NA
Chrysene			0.179	J	0.06	U	0.061	U	0.02	0.2
Benzo(b)fluoranthene			0.163		0.038	U	0.039	U	0.02	0.2
Benzo(k)fluoranthene			0.075		0.01	U	0.01	U	NA	NA
Benzo(a)pyrene			0.171		0.022	J	0.02	U	0.02	0.2
Dibenzo(a,h)anthracene			0.034	J	0.03	U	0.03	U	NA	NA
Benzo(g,h,i)perylene			0.1	J	0.1	U	0.1	U	NA	NA
Indeno(1,2,3-cd)pyrene			0.118	J	0.067	U	0.068	U	NA	NA

VOC - Volatile Organic Compound.

PAH - Polynuclear Aromatic Hydrocarbon.

Bold Values indicate concentrations exceeding PAL.

U - Indicates constituent not detected

J - Indicates estimated concentration

PAL - Wisconsin Department of Natural Resources Preventative Action Limit.

NA - PAL not established for this parameter.

Bold and shaded values indicate concentrations exceeding both PAL and ES.

Table 3 (contd.)

**Groundwater Sample Analytical Results
Containment Performance Wells
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin**

Sample ID:	MW-30S-10		MW-31S-10		MW-32S-10		MW-33S-10		MW-34S-10		MW-35S-10		MW-36S-10		MW-37S-10		WDNR PAL	WDNR ES
Sample Matrix:	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
Sample Date:	6/29/00		6/29/00		6/28/00		6/28/00		6/28/00		6/28/00		6/30/00		6/28/00		ug/L	ug/L
Units of Measure:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L			
Parameters																		
VOCs																		
Benzene	0.2	U	0.2	U	0.2	U	1.0	U	9.5	J	0.2	U	0.2	U	-		0.5	5
Toluene	0.2	U	0.2	U	0.2	U	1.5	J	2.0	U	0.2	U	0.2	U	-		68.6	343
Ethylbenzene	0.2	U	0.2	U	0.2	U	9.0		22		0.2	U	0.2	U	-		140	700
Total Xylenes	0.6	U	0.6	U	0.6	U	19		71		0.6	U	0.6	U	-		124	620
PAHs																		
Naphthalene	0.79	U	0.81	U	40.7		1920		5980		42.7		0.82	U	0.79	U	8.0	40
Acenaphthylene	0.79	U	0.81	U	2.33	J	86.8		245	J	6.18	J	0.82	U	0.79	U	NA	NA
Acenaphthene	0.79	U	0.81	U	1.1	J	26		170	J	14		0.82	U	0.79	U	NA	NA
Fluorene	0.17	U	0.17	U	0.17	U	1.41		89		4.92		0.17	U	0.17	U	80	400
Phenanthrene	0.069	U	0.071	U	0.071	U	0.07	U	82		2.84		0.071	U	0.069	U	NA	NA
Anthracene	0.070	J	0.031	U	0.033	J	0.03	U	11.3	J	2.02		0.038	J	0.03	U	600	3,000
Fluoranthene	0.044	J	0.031	U	0.03	U	0.03	U	10.4	J	2.77		0.031	U	0.03	U	80	400
Pyrene	0.17	U	0.17	U	0.17	U	0.17	U	17	U	2.14		0.17	U	0.17	U	50	250
Benzo(a)anthracene	0.02	U	0.02	U	0.02	U	0.02	U	2.0	U	0.272		0.02	U	0.02	U	NA	NA
Chrysene	0.059	U	0.061	U	0.061	U	0.06	U	5.9	U	0.166	J	0.061	U	0.059	U	0.02	0.2
Benzo(b)fluoranthene	0.037	U	0.039	U	0.038	U	0.038	U	3.8	U	0.171		0.039	U	0.038	U	0.02	0.2
Benzo(k)fluoranthene	0.0099	U	0.01	U	0.01	U	0.01	U	1.0	U	0.078		0.01	U	0.0099	U	NA	NA
Benzo(a)pyrene	0.02	U	0.02	U	0.02	U	0.02	U	2.0	U	0.162		0.02	U	0.02	U	0.02	0.2
Dibenzo(a,h)anthracene	0.03	U	0.031	U	0.03	U	0.03	U	3.0	U	0.029	U	0.031	U	0.03	U	NA	NA
Benzo(g,h,i)perylene	0.099	U	0.1	U	0.1	U	0.1	U	9.9	U	0.107	J	0.1	U	0.099	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.066	U	0.068	U	0.068	U	0.067	U	6.6	U	0.177	J	0.068	U	0.066	U	NA	NA

VOC - Volatile Organic Compound.

PAH - Polynuclear Aromatic Hydrocarbon.

Bold values indicate concentration exceeding PAL

U - Indicates constituent not detected

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.

NA - PAL or ES not available for this parameter.

Bold and shaded values indicate concentration exceeding PAL and ES

J - Indicates estimated concentration

ES = Enforcement Standard (WDNR)

- = Not analyzed

Table 3 (Cont.)

**Groundwater Sample Analytical Results
Treatment Performance Wells
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin**

Sample ID:	TG1-1-10	TG1-2-10	TG1-3-10	TG2-1-10	TG2-2-10	TG2-3-10	WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Sample Date:	6/26/00	6/26/00	6/26/00					
Units of Measure:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		
Parameters								
VOCs								
Benzene	6.8	0.33	J	0.2			0.5	5
Toluene	1.7	J	0.35	J	0.22	J	68.6	343
Ethylbenzene	7.2		0.38	J	0.2		140	700
Total Xylenes	15		0.98	J	0.6		124	620
PAHs								
Naphthalene	962		169		7.93	J	8.0	40
Acenaphthylene	11.8	J	4.2	U	0.81	U	NA	NA
Acenaphthene	48		40	J	7	J	NA	NA
Fluorene	20		21		2.9		80	400
Phenanthrene	14.8		30		2.4		NA	NA
Anthracene	3.8		6.7		0.63		600	3,000
Fluoranthene	5.2		7.6		0.64		80	400
Pyrene	4.8		6.9		0.58	J	50	250
Benzo(a)anthracene	0.8		0.68		0.038	J	NA	NA
Chrysene	0.58	J	0.46	J	0.061	U	0.02	0.2
Benzo(b)fluoranthene	0.52		0.24	J	0.039	U	0.02	0.2
Benzo(k)fluoranthene	0.232	J	0.12	J	0.012	J	NA	NA
Benzo(a)pyrene	0.43		0.23	J	0.03	J	0.02	0.2
Dibenzo(a,h)anthracene	0.15	U	0.16	U	0.03	U	NA	NA
Benzo(g,h,i)perylene	0.5	U	0.52	U	0.1	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.43	J	0.35	U	0.068	U	NA	NA

VOC - Volatile Organic Compound.

PAH - Polynuclear Aromatic Hydrocarbon.

Bold values indicate concentration exceeding PAL

U - Indicates constituent not detected

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.

NA - PAL or ES not available for this parameter.

Bold and shaded values indicate concentration exceeding PAL and ES

J - Indicates estimated concentration

ES = Enforcement Standard (WDNR)

Table 3 (Cont.)

**Groundwater Sample Analytical Results
Treatment Performance Wells
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin**

Sample ID:	TG3-1-10	TG3-2-10	TG3-3-10	TG4-1-10	TG4-2-10	TG4-3-10	WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Sample Date:								
Units of Measure:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		
Parameters								
VOCs								
Benzene							0.5	5
Toluene							68.6	343
Ethylbenzene							140	700
Total Xylenes							124	620
PAHs								
Naphthalene							8.0	40
Acenaphthylene							NA	NA
Acenaphthene							NA	NA
Fluorene							80	400
Phenanthrene							NA	NA
Anthracene							600	3,000
Fluoranthene							80	400
Pyrene							50	250
Benzo(a)anthracene							NA	NA
Chrysene							0.02	0.2
Benzo(b)fluoranthene							0.02	0.2
Benzo(k)fluoranthene							NA	NA
Benzo(a)pyrene							0.02	0.2
Dibenzo(a,h)anthracene							NA	NA
Benzo(g,h,i)perylene							NA	NA
Indeno(1,2,3-cd)pyrene							NA	NA

VOC - Volatile Organic Compound.

PAH - Polynuclear Aromatic Hydrocarbon.

Bold values indicate concentration exceeding PAL

U - Indicates constituent not detected

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.

NA - PAL or ES not available for this parameter.

Bold and shaded values indicate concentration exceeding PAL and ES

J - Indicates estimated concentration

ES = Enforcement Standard (WDNR)

Table 3 (Cont.)

**Groundwater Sample Analytical Results
Treatment Performance Wells
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin**

Sample ID:	TG5-1-10	TG5-2-10	TG5-3-10	TG6-1-10	TG6-2-10	TG6-3-10	WDNR PAL ug/L	WDNR ES ug/L		
Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater				
Sample Date:					6/27/00	6/27/00				
Units of Measure:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L				
Parameters										
VOCs										
Benzene					0.2	U	0.2	U	0.5	5
Toluene					0.2	U	0.2	U	68.6	343
Ethylbenzene					0.2	U	0.2	U	140	700
Total Xylenes					0.6	U	0.6	U	124	620
PAHs										
Naphthalene					0.8	U	0.8	U	8.0	40
Acenaphthylene					0.8	U	0.8	U	NA	NA
Acenaphthene					0.8	U	0.8	U	NA	NA
Fluorene					0.17	U	0.17	U	80	400
Phenanthrene					0.31		0.07	U	NA	NA
Anthracene					0.24		0.056	J	600	3,000
Fluoranthene					0.58		0.047	J	80	400
Pyrene					0.63	J	0.17	U	50	250
Benzo(a)anthracene					0.171		0.02	U	NA	NA
Chrysene					0.179	J	0.06	U	0.02	0.2
Benzo(b)fluoranthene					0.163		0.038	U	0.02	0.2
Benzo(k)fluoranthene					0.075		0.01	U	NA	NA
Benzo(a)pyrene					0.171		0.022	J	0.02	0.2
Dibenzo(a,h)anthracene					0.034	J	0.03	U	NA	NA
Benzo(g,h,i)perylene					0.1	J	0.1	U	NA	NA
Indeno(1,2,3-cd)pyrene					0.118	J	0.067	U	NA	NA

VOC - Volatile Organic Compound.

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.

ES = Enforcement Standard (WDNR)

PAH - Polynuclear Aromatic Hydrocarbon.

NA - PAL or ES not available for this parameter.

Bold values indicate concentration exceeding PAL

Bold and shaded values indicate concentration exceeding PAL and ES

U - Indicates constituent not detected

J - Indicates estimated concentration

Table 3 (Cont.)

**Groundwater Sample Analytical Results
Intermediate Wells
Second Quarter 2000
Moss-American Site
Milwaukee, Wisconsin**

Sample ID:	MW-3I-10	MW-4I-10	MW-7I-10	MW-9I-10	MW-20I-10	WDNR PAL ug/L	WDNR ES ug/L	
Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Sample Date:								
Units of Measure:	ug/L	ug/L	ug/L	ug/L	ug/L			
Parameters								
VOCs								
Benzene						0.5	5	
Toluene						68.6	343	
Ethylbenzene						140	700	
Total Xylenes						124	620	
PAHs								
Naphthalene						8.0	40	
Acenaphthylene						NA	NA	
Acenaphthene						NA	NA	
Fluorene						80	400	
Phenanthrene						NA	NA	
Anthracene						600	3,000	
Fluoranthene						80	400	
Pyrene						50	250	
Benzo(a)anthracene						NA	NA	
Chrysene						0.02	0.2	
Benzo(b)fluoranthene						0.02	0.2	
Benzo(k)fluoranthene						NA	NA	
Benzo(a)pyrene						0.02	0.2	
Dibenzo(a,h)anthracene						NA	NA	
Benzo(g,h,i)perylene						NA	NA	
Indeno(1,2,3-cd)pyrene						NA	NA	

VOC - Volatile Organic Compound.

ES = Enforcement Standard (WDNR)

PAH - Polynuclear Aromatic Hydrocarbon.

PAL - Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.

Bold values indicate concentration exceeding PAL

NA - PAL or ES not available for this parameter.

Bold and shaded values indicate concentration exceeding PAL and ES

U - Indicates constituent not detected

J - Indicates estimated concentration

Table 4
Concentration Trends in Groundwater Samples
Four Quarters of 1998 and 1999, Two Quarters of 2000
Kerr-McGee - Moss-American Site
Milwaukee, Wisconsin

	MW-4S	MW-7S	TW-06	TW-09
Benzene				
First Quarter (March '98)	10	5	0.2 U	2 J
Second Quarter (June '98)	8.0	5.0	0.2 U	0.5 J
Third Quarter (September '98)	3.0	8.0 J	0.2 U	2 U
Fourth Quarter (December '98)	3 J	NS	0.2 U	2 U
First Quarter (March '99)	5.0	9.0	0.2 U	0.3 J
Second Quarter (June '99)	6.0	7.0 J	0.2 U	2 U
Third Quarter (September '99)	3.0	9.0	0.2 U	0.8 J
Fourth Quarter (December '99)	2.8	7.1	0.2 U	---
First Quarter (March '00)	4.0	5.2	0.2 U	---
Second Quarter (June '00)	3.4	4.0 J	0.2 U	---
Naphthalene				
First Quarter (March '98)	2,080	6,470	3.51J	3,080
Second Quarter (June '98)	172 J	16.1	15.1J	11,800
Third Quarter (September '98)	863 J	7,140	19.0 J	580 J
Fourth Quarter (December '98)	1,760	NS	9.3 J	14,900
First Quarter (March '99)	1,330	5,560	19.9	9,500
Second Quarter (June '99)	940	6,400	3.9 U	11,600
Third Quarter (September '99)	418 J	0.80 U	7.9 U	126,000
Fourth Quarter (December '99)	790	4,740	9.0 J	---
First Quarter (March '00)	1,020	3,950	9.8 J	---
Second Quarter (June '00)	364	4,260	6.96 J	---

NS = Not Sampled

U = Constituent not detected; method detection limit (MDL) of the analysis reported

J = Estimated Concentration

--- = TW-09 was removed to install the funnel and gate groundwater system.

Table 4 (cont'd)
Concentration Trends in Groundwater Samples
Four Quarters of 1998 and 1999, Two Quarters of 2000
Kerr McGee - Moss- American Site
Milwaukee, Wisconsin

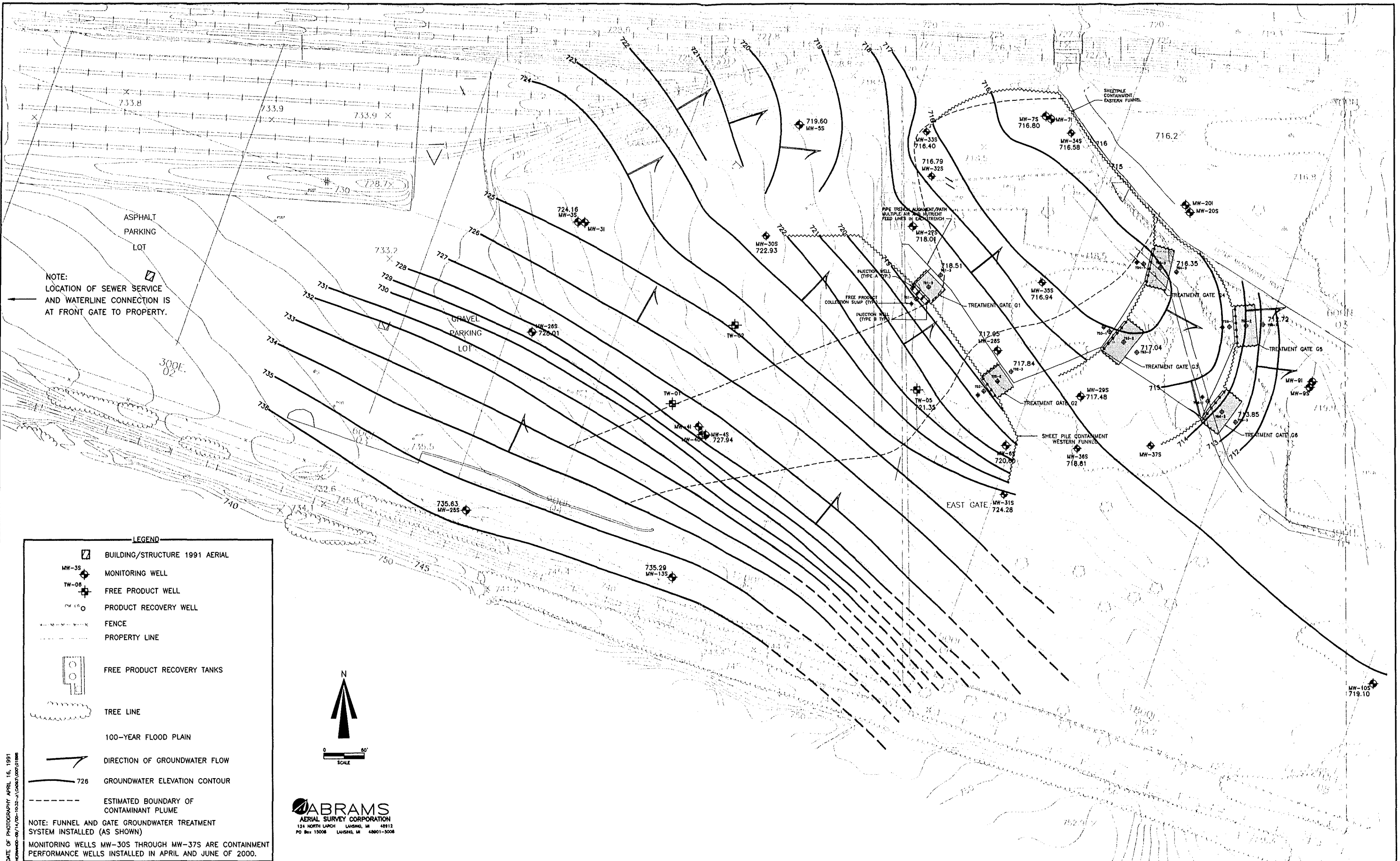
	MW-4S	MW-7S	TW-05	TW-09
Fluorene				
First Quarter (March '98)	368	3.3 U	3.3 U	21 U
Second Quarter (June '98)	50	3.6 J	105	3,590
Third Quarter (September '98)	323 J	30	90	3.3 UJ
Fourth Quarter (December '98)	316	NS	62.3	4,120
First Quarter (March '99)	271	30	65.4	4,300
Second Quarter (June '99)	547	36.5	79.6	5,200
Third Quarter (September '99)	651	39.2	136	47,700
Fourth Quarter (December '99)	333	24.4	66.6	---
First Quarter (March '00)	281	15.8	55.5	---
Second Quarter (June '00)	223	12.8	53.2	---
Benzo(a) pyrene				
First Quarter (March '98)	25.3	0.021 U	2.04	20.3
Second Quarter (June '98)	112	25.3	1.63	226
Third Quarter (September '98)	7.45 J	0.42	3.4	4.4 J
Fourth Quarter (December '98)	8.95	NS	1.72	228
First Quarter (March '99)	6.10	0.43	2.10	240
Second Quarter (June '99)	35.1	0.12 U	1.42	230 J
Third Quarter (September '99)	40.5	0.022 U	4.33	3,610
Fourth Quarter (December '99)	9.7	0.21 U	1.49	---
First Quarter (March '00)	8.4	0.21 U	1.44	---
Second Quarter (June '00)	1.7 J	0.02 U	0.361	---

NS = Not Sampled

U = Constituent not detected; method detection limit (MDL) of the analysis reported

J = Estimated Concentration

--- = TW-09 was removed to install the funnel and gate groundwater system.



NOTE:
LOCATION OF SEWER SERVICE
AND WATERLINE CONNECTION IS
AT FRONT GATE TO PROPERTY.

LEGEND

- BUILDING/STRUCTURE 1991 AERIAL
- MW-35 MONITORING WELL
- TW-01 FREE PRODUCT WELL
- PR-01 PRODUCT RECOVERY WELL
- FENCE
- PROPERTY LINE
- FREE PRODUCT RECOVERY TANKS
- TREE LINE
- 100-YEAR FLOOD PLAIN
- DIRECTION OF GROUNDWATER FLOW
- 726 GROUNDWATER ELEVATION CONTOUR
- ESTIMATED BOUNDARY OF CONTAMINANT PLUME

NOTE: FUNNEL AND GATE GROUNDWATER TREATMENT SYSTEM INSTALLED (AS SHOWN)

MONITORING WELLS MW-30S THROUGH MW-37S ARE CONTAINMENT PERFORMANCE WELLS INSTALLED IN APRIL AND JUNE OF 2000.

N
↑
SCALE
0 60'

ABRAMS
AERIAL SURVEY CORPORATION
124 NORTH LARCH LANSING, MI 48912
PO Box 15008 LANSING, MI 48901-3008

DATE OF PHOTOGRAPHY APRIL 16, 1991
HOWARD-09/11/00-10:35-A/CAD/000/0100

NO.	DATE	APPR.	NO.	DATE	APPR.	REVISION

MOSS - AMERICAN SITE
Milwaukee, Wisconsin

WESTON
MANAGED SERVICES/CONSULTANTS

KILGORE

CHECKED	DATE	CLIENT APPROVALS	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
		ISSUED FOR	DATE

GROUNDWATER ELEVATION CONTOUR MAP
2nd QUARTER 2000

DRWN	D.C.H.	DATE	JUNE 99	DWG. NO.	1	REV. NO.	
SCALE	1" = 60'	P.O. NO.	026870070030002	SHT.		OF	

ATTACHMENT A

LANCASTER LABORATORIES ANALYTICAL REPORT

Thursday, August 24, 2000

I have reviewed the analytical data provided by Lancaster Laboratories for the Moss American Site in Milwaukee, Wisconsin upon the information that was provided by the laboratory. The water samples we analyzed for Polynuclear Aromatic Hydrocarbons PAHs, and BTEX. A summary of the data validation provided below for samples delivery groups SDG MAS02, MOS50, MOS52, and MOS63.

Polynuclear Aromatic Hydrocarbons (PAHs by HPLC, U.S. EPA Method 8310)

Moss American Site **SDG # MAS02**

1. Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>
MW-4S-10	3410367	water	06/30/00	07/05/00	07/11/00
MW-4S-10MS	3410368	water	06/30/00	07/05/00	07/11/00
MW-4S-10MSD	3410369	water	06/30/00	07/05/00	07/11/00
MW-13S-10	3410370	water	06/30/00	07/05/00	07/10/00
MW-25S-10	3410371	water	06/30/00	07/05/00	07/10/00
MW-25S-10DUP	3410372	water	06/30/00	07/05/00	07/11/00
MW-5S-10	3410373	water	06/30/00	07/05/00	07/11/00
MW-3S-10	3410374	water	06/30/00	07/05/00	07/11/00
MW-26S-10	3410375	water	06/30/00	07/05/00	07/11/00
FB-03	3410376	water	06/29/00	07/05/00	07/11/00
FB-04	3410377	water	06/29/00	07/05/00	07/11/00
FB-05	3410378	water	06/29/00	07/05/00	07/11/00

2. Holding Times and Sample Receipt:

All samples were extracted and analyzed within the required holding times. All samples were received in condition by the laboratory.

3. Method Blank:

The method blank associated with the water samples PBLKTU extracted on 07/05/00 and analyzed on 07/10/00 was free of contamination.

4. Surrogate:

The surrogate recovery in the UV-Vis detector for NBNZ=Nitrobenzene (29-136%) was within the QC control limits; except for MW-26S-10 (145%) was outside the acceptance control limits. And the recovery for TPNL=Triphenylene in all the samples within the acceptance control limits (33-139%), except for the unspiked sample MW-4S-10 and the MS/MSD for that sample were diluted out and MW-26S10 was outside the QC control limits.

The surrogate recovery in the fluorescence for NBNZ=Nitrobenzene (29-136%) was outside the control limits, except for the unspiked sample MW-4S-10 and the MS/MSD for that sample were diluted out. And the recovery for TPNL=Triphenylene (33-139%) was within the control limits for all the water samples, except for the sample MW-26S-10 was outside the QC control limits and diluted out for the unspiked sample MW-4S-10 and the MS/MSD for that sample.

5. Laboratory Control Sample:

The laboratory control samples LCSF6 recovery was within the acceptance QC control limits.

6. Matrix Spike/Matrix Spike Duplicate Recovery:

The matrix spike and matrix spike MS/MSD duplicate were performed on sample MW-4S-10MS/MSD (3410368, 3410369). The matrix spike/matrix spike duplicate MS/MSD recoveries were all within the acceptance QC control limits, except for the following compounds in MS/MSD: fluorene, phenanthrene, anthracene, fluoranthene, dibenzo (a, h) anthracene, benzo (g, h, i) perylene, in MS for indeno (1,2,3-cd) pyrene, and in MSD for the following compounds: pyrene, benzo (a) anthracene, benzo (b) fluoranthene. No action was taken because the laboratory control sample results associated with these samples were within the laboratory and QAPP acceptance limits. The relative percent difference RPD was for all the compounds outside the acceptance QC control limits; except for in indeno (1,2,3-cd) pyrene (31%) was outside the QC control limits (30%).

7. Initial and Continuing Calibration:

The initial calibration, calibration verification, retention time and the analytical sequence were all with the acceptance control limits.

Volatile-BETX by GC/MS (U.S. EPA Method 8021B)

Moss American Site
SDG # MAS02

1.Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
MW-4S-10	3410367	water	06/30/00	07/06/00
MW-4S-10MS	3410368	water	06/30/00	07/06/00
MW-4S-10MSD	3410369	water	06/30/00	07/06/00
MW-13S-10	3410370	water	06/30/00	07/06/00
MW-25S-10	3410371	water	06/30/00	07/06/00
MW-25S-10DUP	3410372	water	06/30/00	07/06/00
MW-5S-10	3410373	water	06/30/00	07/06/00
MW-3S-10	3410374	water	06/30/00	07/06/00
MW-26S-10	3410375	water	06/30/00	07/06/00
FB-03	3410376	water	06/29/00	07/06/00
FB-04	3410377	water	06/29/00	07/06/00
FB-05	3410378	water	06/29/00	07/06/00
Trip Blank	3410379	water	-----	07/06/00

2. Holding Times and Sample Receipt:

All samples were analyzed within the required holding times. All samples were received in good condition by the laboratory.

3. Method Blank:

Two method blanks BLK6670, and BLK6670 were associated with the water samples. All the method blanks were free of contamination.

4. Matrix Spike/Matrix Spike Duplicate Recovery:

The matrix spike/matrix spike duplicate were performed on sample MW-4S-10MS/MSD (3410368, 3410369). The matrix spike/matrix spike duplicate and relative percent difference RPD recoveries were within the control limits (30%).

5. Laboratory Control Sample/Laboratory Control Sample Duplicate Recovery:

The laboratory control sample/laboratory control sample duplicate and the relative percent difference RPD recoveries were within the laboratory and QAPP acceptance limits.

6. Surrogate:

The surrogate trifluorotoluene- PID (69-132%) recovery for all the water samples was within the laboratory and QAPP acceptance limits.

7. Initial and Continuing Calibration:

The initial calibration, and calibration verification were all with the acceptance control limits.

Polynuclear Aromatic Hydrocarbons (PAHs by HPLC, U.S. EPA Method 8310)

Moss American Site

SDG # MOS50

1.Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>
MA3-MW7S-280600-01	3408127	water	06/28/00	07/01/00	07/04, 06/00
MA3-MW32S-280600-02	3408128	water	06/28/00	01/01/00	07/04/00
MA3-MW33S-280600-03	3408129	water	06/28/00	07/01/00	07/04, 05/00
MA3-MW37S-280600-04	3408130	water	06/28/00	07/01/00	07/04/00
MA3-MW35S-280600-05	3408131	water	06/28/00	07/01/00	07/04/00
MA3-MW34S-280600-06	3408132	water	06/28/00	07/01/00	07/06/00
MA3-TG6-2-270600-21D	3408460	water	06/27/00	07/01/00	07/04/00
MA3-TG6-3-270600-22D	3408461	water	06/27/00	07/01/00	07/04/00

2. Holding Times and Sample Receipt:

All samples were extracted and analyzed within the required holding times. All samples were received in good condition by the laboratory.

3. Method Blank:

The method blank that was associated with the water samples PBLKRZ extracted on 07/01/00 and analyzed on 07/04/00 free of contamination.

4. Surrogate:

The surrogate recovery for NBNZ=Nitrobenzene, TPNL=Triphenylene (33-139%) for the UV-Vis detector and for TPNL=Triphenylene for the fluorescence detector was within the control limits, except for the compound NBNZ=Nitrobenzene (29-136%) in the fluorescence detector was outside the QC control limits for the water samples.

5. Laboratory Control Sample Recovery:

The laboratory control samples LCSDB recovery was within the acceptance QC control limits.

6. Matrix Spike/Matrix Spike Duplicate Recovery:

The matrix spike/matrix spike duplicate and the relative percent difference RPD (30%) recoveries were within the acceptance QC control limits.

7. Initial and Continuing Calibration:

The initial calibration, calibration verification, retention time and the analytical sequence were all with the acceptance control limits.

Volatile-BETX by GC/MS (U.S. EPA Method 8021B)

Moss American Site **SDG # MOS50**

1.Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
MA3-TG6-2-270600-21D	3408460	water	06/27/00	07/01/00
MA3-TG6-3-270600-22D	3408461	water	06/27/00	07/02/00
Trip Blank	3408463	water	06/27/00	07/01/00
MA3-MW7S-0280600-01	3408464	water	06/28/00	07/02/00
MA3-MW32S-0280600-02	3408465	water	06/28/00	07/02/00
MA3-MW33S-0280600-03	3408466	water	06/28/00	07/02/00
MA3-MW27S-0280600-04	3408467	water	06/28/00	07/02/00
MA3-MW35S-0280600-05	3408468	water	06/28/00	07/02/00

MA3-MW34S-0280600-06	3408472	water	06/28/00	07/02/00
FB02	3408473	water	06/27/00	07/02/00
FB01	3408474	water	06/27/00	07/02/00

2. Holding Times and Sample Receipt:

All samples were analyzed within the required holding times. All samples were received in good condition by the laboratory.

3. Method Blank:

Two method blanks BLK5556, BLK5557 were associated with the water samples, and they were free of contamination.

4. Matrix Spike Recovery:

The matrix spike was performed on sample MA3-TG6-2-270600-21D (3408460). The matrix spike recovery was within the laboratory and QAPP control limits.

5. Laboratory Control Sample/Laboratory Control Sample Recovery:

The laboratory control sample/laboratory control sample duplicate and the relative percent difference RPD (30%) recoveries were within the laboratory and QAPP acceptance limits.

6. Surrogate:

The surrogate trifluorotoluene- PID (69-132%) recovery for all the water samples was within the laboratory and QAPP acceptance limits.

7. Initial and Continuing Calibration:

The initial calibration, and calibration verification were all with the acceptance control limits.

Polynuclear Aromatic Hydrocarbons (PAHs by HPLC, U.S. EPA Method 8310)

Moss American Site

SDG # MOS52

1. Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>
MA-28S-10	3409741	water	06/29/00	07/03/00	07/06/00
MA3-MW31S-290600-02	3409742	water	06/29/00	07/03/00	07/06/00
TW-05-10	3409743	water	06/29/00	07/03/00	07/06/00
MW-27S-10	3409744	water	06/29/00	07/03/00	07/06/00
MA3-MW36S-290600-01	3409745	water	06/29/00	07/03/00	07/06/00
FB-01	3409746	water	06/29/00	07/03/00	07/04/00
FB-02	3409747	water	06/29/00	07/03/00	07/04/00
MW-6S-10	3409749	water	06/29/00	07/03/00	07/06/00
MW-29S-10	3409750	water	06/29/00	07/03/00	07/06/00

MW-9S-10	3409751	water	06/29/00	07/03/00	07/06/00
MW-10S-10	3409752	water	06/29/00	07/03/00	07/06/00
MW-30S-10	3409753	water	06/29/00	07/03/00	07/06/00
MW-30S-10MS	3409754	water	06/29/00	07/03/00	07/06/00
MW-30S-10MSD	3409755	water	06/29/00	07/03/00	07/06/00
MW-29S-10	3409756	water	06/29/00	07/03/00	07/06/00
MW-9S-10DP	3409757	water	06/29/00	07/03/00	07/06/00

2. Holding Times and Sample Receipt:

All samples were extracted and analyzed within the required holding times. All samples were received in condition by the laboratory.

3. Method Blank:

Three method blanks were associated with the water samples PBLKSN extracted on 07/03/00 and analyzed on 07/06/00 was free of contamination except for the method blank PBLKS6 extracted on 07/03/00 and analyzed on 07/03/00 was contained chrysene 0.10ug/L.

4. Surrogate:

The surrogate recovery for TPNL=Triphenylene (33-139%) in the fluorescence detector, NBNZ=Nitrobenzene (29-136%) and TPNL=Triphenylene (33-139%) in the UV-Vis detectors was within the control limits for all the water samples, except for the compound NBNZ=Nitrobenzene (29-136%) in the fluorescence detector was outside the QC control limits.

5. Laboratory Control Sample:

The laboratory control samples LCSDI, and LCSDZ recoveries were within the acceptance QC control limits.

6. Matrix Spike/Matrix Spike Duplicate Recovery:

The matrix spike and matrix spike MS/MSD duplicate were performed on sample MW-30S-10MS/MSD (3409754, 3409755). The matrix spike/matrix spike duplicate MS/MSD and the relative percent difference RPD recoveries were all within the acceptance QC control limits.

7. Initial and Continuing Calibration:

The initial calibration, calibration verification, retention time and the analytical sequence were all with the acceptance control limits.

Volatile-BETX by GC/MS (U.S. EPA Method 8021B)

Moss American Site

SDG # MOS52

1. Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
MA-28S-10	3409741	water	06/29/00	07/03/00
MA3-MW31S-290600-02	3409742	water	06/29/00	07/03/00
TW-05-10	3409743	water	06/29/00	07/03/00
MW-27S-10	3409744	water	06/29/00	07/03/00
MA3-MW36S-290600-01	3409745	water	06/29/00	07/04/00
Trip Blank	3409748	water	06/29/00	07/03/00
MW-6S-10	3409749	water	06/29/00	07/04/00
MW-29S-10	3409750	water	06/29/00	07/05/00
MW-9S-10	3409751	water	06/29/00	07/05/00
MW-10S-10	3409752	water	06/29/00	07/05/00
MW-30S-10	3409753	water	06/29/00	07/03/00
MW-30S-10MS	3409754	water	06/29/00	07/03/00
MW-30S-10MSD	3409755	water	06/29/00	07/03/00
MW-29S-10	3409756	water	06/29/00	07/05/00
MW-9S-10DP	3409757	water	06/29/00	07/05/00

2. Holding Times and Sample Receipt:

All samples were analyzed within the required holding times. All samples were received in good condition by the laboratory.

3. Method Blank:

Three method blanks BLK5610, BLK5611, and BLK5612 were associated with the water samples. All the method blanks free of contamination.

4. Matrix Spike/Matrix Spike Duplicate Recovery:

The matrix spike/matrix spike duplicate were performed on sample MW-30S-10MS/MSD (3409754, 3409755). The matrix spike/matrix spike duplicate and relative percent difference RPD recoveries were within the control limits (30%).

5. Laboratory Control Sample/Laboratory Control Sample Duplicate Recovery:

The laboratory control sample/laboratory control sample duplicate and the relative percent difference RPD recoveries were within the laboratory and QAPP acceptance limits.

6. Surrogate:

The surrogate trifluorotoluene- PID (69-132%) recovery for all the water samples was within the laboratory and QAPP acceptance limits.

7. Initial and Continuing Calibration:

The initial calibration, and calibration verification were all with the acceptance control limits.

Polynuclear Aromatic Hydrocarbons (PAHs by HPLC, U.S. EPA Method 8310)

Moss American Site

SDG # MOS63

1. Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>
MW-20S-10	3413616	water	07/07/00	07/11/00	07/12/00

2. Holding Times and Sample Receipt:

All samples were extracted and analyzed within the required holding times. All samples were received in condition by the laboratory.

3. Method Blank:

Three method blanks was associated with the water sample PBLKWL extracted on 07/11/00 and analyzed on 07/12/00 contained anthracene 0.033ug/L.

The amount of anthracene in the sample was less 10 times the amount that found in the method blank. Therefore, no qualification is required.

4. Surrogate:

The surrogate recovery for NBNZ=Nitrobenzene (29-136%), TPNL=Triphenylene (33-139%) in the fluorescence detector, and TPNL=Triphenylene (33-139%) in the UV-Vis detectors was within the control limits for all the water samples, except for the NBNZ=Nitrobenzene (29-136%) compound in the UV-Vis detector was outside the QC control limits.

5. Laboratory control Sample:

The laboratory control samples LCSHT recovery was within the acceptance QC control limits.

6. Matrix Spike/Matrix Spike Duplicate:

The matrix spike and matrix spike MS/MSD duplicate were performed on sample from different set. The matrix spike/matrix spike duplicate MS/MSD and the relative percent difference RPD recoveries were all within the acceptance QC control limits.

7. Initial and Continuing Calibration:

The initial calibration, calibration verification, retention time and the analytical sequence were all with the acceptance control limits.

Volatile-BETX by GC/MS (U.S. EPA Method 8021B)

Moss American Site **SDG # MOS63**

1. Samples:

<u>Client Code</u>	<u>Lab Sample Number</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
MW-20S-10	3413616	water	07/07/00	07/12/00
Trip Blank	3413617	water	07/07/00	07/12/00

2. Holding Times and Sample Receipt:

All samples were analyzed within the required holding times. All samples were received in good condition by the laboratory.

3. Method Blank:

The method blank BLK5567 was associated with the water samples. The method blank was free of contamination.

4. Matrix Spike/Matrix Spike Duplicate :

The matrix spike/matrix spike duplicates were performed on sample from different set. The matrix spike/matrix spike duplicate and relative percent difference RPD recoveries were within the control limits (30%).

5. Laboratory Control Sample Recovery:

The laboratory control sample recovery was within the laboratory and QAPP acceptance limits.

6. Surrogate:

The surrogate trifluorotoluene- PID (69-132%) recovery for all the water samples was within the laboratory and QAPP acceptance limits.

7. Initial and Continuing Calibration:

The initial calibration, and calibration verification were all with the acceptance control limits.

Lancaster Laboratories Sample No. WW 3410374

Collected: 06/30/2000 11:30 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-3S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

3S-10 SDG#: MAS02-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.79	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.79	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.79	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.069	ug/l	1
03285	Anthracene	120-12-7	0.044 J	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.059	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.037	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.0099	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.066	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 21:22	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/11/2000 00:51	Michelle J. Kolodziejewski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410374

Collected: 06/30/2000 11:30 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-3S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

3S-10 SDG#: MAS02-06



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410367

Collected: 06/30/2000 09:45 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:54 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-4S-10 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

45-10 SDG#: MAS02-01BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	3.4	0.20	ug/l	1
00777	Toluene	108-88-3	6.5	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	9.8	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	19.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	364. J	39.	ug/l	50
03281	Acenaphthylene	208-96-8	84. J	39.	ug/l	50
03282	Acenaphthene	83-32-9	520.	39.	ug/l	50
03283	Fluorene	86-73-7	223.	8.3	ug/l	50
03284	Phenanthrene	85-01-8	7.2 J	3.4	ug/l	50
03285	Anthracene	120-12-7	46.4	1.5	ug/l	50
03286	Fluoranthene	206-44-0	63.1	1.5	ug/l	50
03287	Pyrene	129-00-0	51.	8.3	ug/l	50
03288	Benzo(a)anthracene	56-55-3	6.4	1.0	ug/l	50
03289	Chrysene	218-01-9	3.0 J	2.9	ug/l	50
03290	Benzo(b)fluoranthene	205-99-2	1.9 J	1.9	ug/l	50
03291	Benzo(k)fluoranthene	207-08-9	1.01 J	0.49	ug/l	50
03292	Benzo(a)pyrene	50-32-8	1.7 J	1.0	ug/l	50
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	1.5	ug/l	50
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	4.9	ug/l	50
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	3.3	ug/l	50

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 16:48	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/11/2000 10:06	Michelle J. Kolodziejski	50
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410368

Collected: 06/30/2000 09:45 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:54 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-4S-10 Matrix Spike Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

45-10 SDG#: MAS02-01MS



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410369

Collected: 06/30/2000 09:45 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:54 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-4S-10 Matrix Spike Dup. Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

45-10 SDG#: MAS02-01MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	25.	0.20	ug/l	1
00777	Toluene	108-88-3	25.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	27.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	76.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	520.	39.	ug/l	50
03281	Acenaphthylene	208-96-8	194.	J 39.	ug/l	50
03282	Acenaphthene	83-32-9	700.	39.	ug/l	50
03283	Fluorene	86-73-7	253.	8.3	ug/l	50
03284	Phenanthrene	85-01-8	8.9	J 3.4	ug/l	50
03285	Anthracene	120-12-7	53.2	1.5	ug/l	50
03286	Fluoranthene	206-44-0	75.9	1.5	ug/l	50
03287	Pyrene	129-00-0	80.	8.3	ug/l	50
03288	Benzo(a)anthracene	56-55-3	9.6	1.0	ug/l	50
03289	Chrysene	218-01-9	8.6	J 2.9	ug/l	50
03290	Benzo(b)fluoranthene	205-99-2	3.5	1.9	ug/l	50
03291	Benzo(k)fluoranthene	207-08-9	2.39	J 0.49	ug/l	50
03292	Benzo(a)pyrene	50-32-8	3.6	J 1.0	ug/l	50
03293	Dibenzo(a,h)anthracene	53-70-3	1.9	J 1.5	ug/l	50
03294	Benzo(g,h,i)perylene	191-24-2	6.8	J 4.9	ug/l	50
03295	Indeno(1,2,3-cd)pyrene	193-39-5	4.5	J 3.3	ug/l	50

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 18:01	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/11/2000 10:56	Michelle J. Kolodziejcki	50
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories
Where quality is a science.

Page 2 of 7

Lancaster Laboratories Sample No. WW 3410373

Collected: 06/30/2000 16:45 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-5S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

5S-10 SDG#: MAS02-05



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

2216 Rev. 3 2

Lancaster Laboratories Sample No. WW 3409749

Collected: 06/29/2000 10:15 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-6S-10 Grab Water Sample

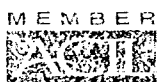
Moss-American Superfund Site - Milwaukee, WI

10-6S SDG#: MOS52-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method	Units	
08213	BTEX (8021)			Detection Limit		
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.79	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.79	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.79	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.069	ug/l	1
03285	Anthracene	120-12-7	0.066 J	0.030	ug/l	1
03286	Fluoranthene	206-44-0	0.032 J	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.059	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.037	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.0098	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.098	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.066	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		



Lancaster Laboratories
2425 New Holland Pike
PO Box 12475
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409749

Collected: 06/29/2000 10:15 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-6S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

10-6S	SDG#: MOS52-09						
08213	BTEX (8021)	SW-846 8021B	1	07/04/2000 01:02	Steven J. Stabinger	1	
01861	PAH's in Water	SW-846 8310	1	07/06/2000 07:07	Michelle J. Kolodziejski	1	
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1	



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408464

Collected: 06/28/2000 15:40 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:30 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

MA3-MW7S-0280600-01 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

7S-01 SDG#: MOS50-05

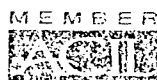
CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
08213	BTEX (8021)						
00776	Benzene	71-43-2	4.0 J	2.0		ug/l	10
00777	Toluene	108-88-3	N.D.	2.0		ug/l	10
00778	Ethylbenzene	100-41-4	19.	2.0		ug/l	10
00779	Total Xylenes	1330-20-7	52.	6.0		ug/l	10

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Due to dilution of the sample made necessary by the high level of non-target compounds, normal quantitation limits were not attained.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 02:28	Melissa Mann	10



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2631

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408127

Collected: 06/28/2000 15:40 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/16/00 at 03:01 AM

P.O. Box 25861

Discard: 8/16/00

Oklahoma City OK 73125

MA3-MW7S-280600-01 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

7SW-1 SDG#: MOS50-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method	Units	
01861	PAH's in Water			Detection Limit		
03280	Naphthalene	91-20-3	4,260.	41.	ug/l	50
03281	Acenaphthylene	208-96-8	150.	0.83	ug/l	1
03282	Acenaphthene	83-32-9	79.	0.83	ug/l	1
03283	Fluorene	86-73-7	12.8	0.18	ug/l	1
03284	Phenanthrene	85-01-8	0.38	0.073	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.031	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.031	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.062	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.031	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.070	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01861	PAH's in Water	SW-846 8310	1	07/04/2000 10:46	Michelle J. Kolodziejski	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 15:54	Michelle J. Kolodziejski	50
03337	PAH Water Extraction	SW-846 3510C	1	07/01/2000 06:30	Joseph S. Feister	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409751

Collected: 06/29/2000 14:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-9S-10 Grab Water Sample

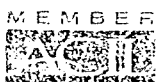
Moss-American Superfund Site - Milwaukee, WI

10-9S SDG#: MOS52-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.81	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.81	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.81	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.071	ug/l	1
03285	Anthracene	120-12-7	0.050 J	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.061	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.068	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	--------	------------------------	---------	-----------------



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409751

Collected: 06/29/2000 14:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Reported: 07/18/00 at 07:43 AM

Discard: 8/18/00

MW-9S-10 Grab Water Sample

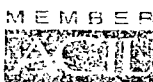
Moss-American Superfund Site - Milwaukee, WI

Kerr-McGee Corporation

P.O. Box 25861

Oklahoma City OK 73125

10-9S	SDG#: MOS52-11						
08213	BTEX (8021)	SW-846 8021B	1	07/05/2000 12:24	Melissa Mann	1	
01861	PAH's in Water	SW-846 8310	1	07/06/2000 08:11	Michelle J. Kolodziejski	1	
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1	



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409757

Collected: 06/29/2000 14:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-9S-10DP Grab Water Sample

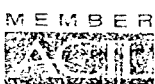
Moss-American Superfund Site - Milwaukee, WI

109S1 SDG#: MOS52-15*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.85	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.85	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.85	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.074	ug/l	1
03285	Anthracene	120-12-7	0.076 J	0.032	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.032	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.063	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.032	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.071	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	--------	------------------------	---------	-----------------



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409757

Collected: 06/29/2000 14:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

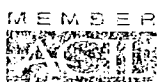
Discard: 8/18/00

Oklahoma City OK 73125

MW-9S-10DP Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

109S1	SDG#: MOS52-15*					
08213	BTEX (8021)	SW-846 8021B	1	07/05/2000 02:10	Gordon A. Lodde	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 09:16	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409752

Collected: 06/29/2000 15:20 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-10S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1010S SDG#: MOS52-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	7.9	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.85	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.85	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.85	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.075	ug/l	1
03285	Anthracene	120-12-7	0.032 J	0.032	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.032	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.064	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.032	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.071	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	--------	------------------------	---------	-----------------



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
717-656-2300 Fax: 717-656-2681 See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409752

Collected: 06/29/2000 15:20 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-10S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1010S	SDG#: MOS52-12					
08213	BTEX (8021)	SW-846 8021B	1	07/05/2000 13:00	Melissa Mann	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 08:33	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410370

Collected: 06/30/2000 10:05 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-13S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

13S10 SDG#: MAS02-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	3.0	ug/l	1
Due to the presence of interferents near their retention times, normal reporting limits were not attained for total xylenes.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.80	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.80	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.80	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.070	ug/l	1
03285	Anthracene	120-12-7	0.040 J	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.060	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.067	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 19:07	Barry R. Shoemaker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410370

Collected: 06/30/2000 10:05 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-13S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

13S10 SDG#: MAS02-02

01861 PAH's in Water

SW-846 8310

1 07/10/2000 23:25

Michelle J.

1

03337 PAH Water Extraction

SW-846 3510C

1 07/05/2000 19:30

Kolodziejcki

Kristi L. Hippey

1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2631

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3413616

Collected: 07/07/2000 15:00 by BS

Account Number: 07802

Submitted: 07/10/2000 09:10

Kerr-McGee Corporation

Reported: 07/19/00 at 11:13 PM

P.O. Box 25861

Discard: 8/19/00

Oklahoma City OK 73125

MW-20S-10 Grab Water Sample

Moss American Superfund Site - Milwaukee, WI

20S10 SDG#: MOS63-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.81	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.81	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.81	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.071	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.060	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.068	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/12/2000 03:11	Patrick N. Evans	1
01861	PAH's in Water	SW-846 8310	1	07/12/2000 18:03	Michelle J. Kolodziejewski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/11/2000 15:15	Wanda F. Oswald	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories
Where quality is a science.

Page 2 of 2

Lancaster Laboratories Sample No. WW 3413616

Collected: 07/07/2000 15:00 by BS

Account Number: 07802

Submitted: 07/10/2000 09:10

Kerr-McGee Corporation

Reported: 07/19/00 at 11:13 PM

P.O. Box 25861

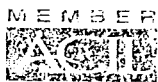
Discard: 8/19/00

Oklahoma City OK 73125

MW-20S-10 Grab Water Sample

Moss American Superfund Site - Milwaukee, WI

20S10 SDG#: MOS63-01



Lancaster Laboratories

2425 New Holland Pike

PO Box 12425

Lancaster, PA 17605-2425

717-655-2300 Fax: 717-356-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

2216 Rev.

Lancaster Laboratories Sample No. WW 3410371

Collected: 06/30/2000 10:40 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Reported: 07/18/00 at 04:55 PM

Discard: 8/18/00

MW-25S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Kerr-McGee Corporation

P.O. Box 25861

Oklahoma City OK 73125

25S10 SDG#: MAS02-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.80	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.80	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.80	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.070	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.060	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.067	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 19:41	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/10/2000 23:46	Michelle J. Kolodziejwski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410371

Collected: 06/30/2000 10:40 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-25S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

25S10 SDG#: MAS02-03



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410372

Collected: 06/30/2000 10:40 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-25S-10 Dup. Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

25S-D SDG#: MAS02-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.81	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.81	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.81	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.071	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.061	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.068	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 20:14	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/11/2000 00:08	Michelle J. Kolodziejwski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425

Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410372

Collected: 06/30/2000 10:40 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-25S-10 Dup. Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

25S-D SDG#: MAS02-04



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410375

Collected: 06/30/2000 11:45 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50
Reported: 07/18/00 at 04:55 PM
Discard: 8/18/00

Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

MW-26S-10 Grab Water Sample
Moss-American Superfund Site - Milwaukee, WI

26S10 SDG#: MAS02-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	0.85 J	0.81	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.81	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.81	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.071	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.061	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.068	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 21:55	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/11/2000 01:12	Michelle J. Kolodziejcki	1
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories
Where quality is a science.

Page 2 of 2

Lancaster Laboratories Sample No. WW 3410375

Collected: 06/30/2000 11:45 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-26S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

26S10 SDG#: MAS02-07

MEMBER



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

2216 Rev. 3

Lancaster Laboratories Sample No. WW 3408467

Collected: 06/28/2000 11:30 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:30 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

MA3-MW27S-0280600-04 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

27S-- SDG#: MOS50-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method Detection Limit	Units	
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 09:07	Melissa Mann	1

MEMBER



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2500 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company. See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409744

Collected: 06/29/2000 10:25 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-27S-10 Grab Water Sample

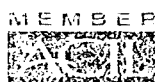
Moss-American Superfund Site - Milwaukee, WI

27S10 SDG#: MOS52-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.78	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.78	ug/l	1
03282	Acenaphthene	83-32-9	2.2 J	0.78	ug/l	1
03283	Fluorene	86-73-7	1.48	0.17	ug/l	1
03284	Phenanthrene	85-01-8	0.082 J	0.069	ug/l	1
03285	Anthracene	120-12-7	0.53	0.029	ug/l	1
03286	Fluoranthene	206-44-0	0.37	0.029	ug/l	1
03287	Pyrene	129-00-0	0.30 J	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	0.024 J	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.059	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.037	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.0098	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.029	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.098	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.066	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	--------	------------------------	---------	-----------------



Lancaster Laboratories
2425 New Holland Pike
PO Box 12475
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409744

Collected: 06/29/2000 10:25 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-27S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

27S10	SDG#: MOS52-04					
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 23:50	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 06:24	Michelle J. Kolodziejcki	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations

Lancaster Laboratories Sample No. WW 3409741

Collected: 06/29/2000 09:10 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-28S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

28S10 SDG#: MOS52-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method	Units	
				Detection Limit		
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.85	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.85	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.85	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.074	ug/l	1
03285	Anthracene	120-12-7	0.063 J	0.032	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.032	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.064	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.032	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.071	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 22:00	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 05:19	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12423
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories
Where quality is a science.

Page 2 of 2

Lancaster Laboratories Sample No. WW 3409741

Collected: 06/29/2000 09:10 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-28S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

28S10 SDG#: MOS52-01

MEMBER



Lancaster Laboratories

2425 New Holland Pk

PO Box 12425

Lancaster, PA 17695-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

2216 Rev. 3

Lancaster Laboratories Sample No. WW 3409750

Collected: 06/29/2000 11:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-29S-10 Grab Water Sample

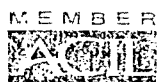
Moss-American Superfund Site - Milwaukee, WI

1029S SDG#: MOS52-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.83	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.83	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.83	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.072	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.031	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.031	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.062	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.031	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.069	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	--------	------------------------	---------	-----------------



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2305 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409750

Collected: 06/29/2000 11:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-29S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1029S	SDG#: MOS52-10					
08213	BTEX (8021)	SW-846 8021B	1	07/05/2000 11:48	Melissa Mann	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 07:50	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409756

Collected: 06/29/2000 11:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-29S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

10-29 SDG#: MOS52-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.88	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.88	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.88	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.19	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.077	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.033	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.033	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.19	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.022	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.066	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.042	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.022	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.033	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.073	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	--------	------------------------	---------	-----------------



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2631

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories

Where quality is a science.

Lancaster Laboratories Sample No. WW 3409756

Collected: 06/29/2000 11:45 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-29S-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

10-29 SDG#: MOS52-14

08213 BTEX (8021)

SW-846 8021B

1 07/05/2000 13:37

Melissa Mann

1

01861 PAH's in Water

SW-846 8310

1 07/06/2000 08:55

Michelle J.

1

Kolodziejcki

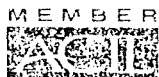
03337 PAH Water Extraction

SW-846 3510C

1 07/03/2000 12:45

John M. Becker

1



Lancaster Laboratories

2425 New Holland Pike

PO Box 12425

Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.

See reverse side for explanation of symbols and abbreviations.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 7802 Sample # 3413616-17

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Kerr McGee</u> Acct. #: _____ Project Name#: <u>Moss American</u> PWSID #: _____ Project Manager: <u>Tom Groan</u> P.O.# _____ Sampler: <u>Brennon Schaefer</u> Quote #: _____ Name of state where samples were collected: <u>Wisconsin</u>				Matrix 4 <input type="checkbox"/> Potable (Check if applicable) <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other			5 Analyses Requested BTEX 5021 PAH 5310					For lab use only FSC: _____ SCR #: <u>437365</u>					
Sample Identification	Date Collected	Time Collected	Grab 3	Composite	Soil	Water	Other	Total # of Containers						Remarks	Temperature of samples upon receipt (if requested)		
MW-205-10	7/7/00	1500	X			X		5	X	X						7/10/00 Per client request, analyze sample R/Kramer	
Trip Blank	7/7/00	1600	X			X		2	X								

7 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>STD TAT</u> Rush results requested by (please circle): Phone Fax Phone #: <u>(847)-918-4000</u> Fax #: <u>(847)-918-4055</u>		Relinquished by: <u>A. Baker</u> Date: <u>3/13/00</u> Time: <u>10:00</u> Received by: <u>Brennon Schaefer</u> Date: <u>6/21/00</u> Time: <u>9:00</u>	
8 Data Package Options (please circle if requested) QC Summary Type VI (Raw Data) Yes No Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP)		Relinquished by: <u>Brennon Schaefer</u> Date: <u>7/7/00</u> Time: <u>1630</u> Received by: <u>FEDEX</u> Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Received by: <u>DLW</u> Date: <u>7-10-00</u> Time: <u>9:00</u>	
Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.) Internal Chain of Custody required? Yes No			

Lancaster Laboratories Sample No. WW 3409743

Collected: 06/29/2000 09:00 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

TW-05-10 Grab Water Sample

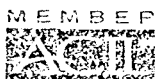
Moss-American Superfund Site - Milwaukee, WI

W0510 SDG#: MOS52-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	6.96 J	0.83	ug/l	1
03281	Acenaphthylene	208-96-8	10.1	0.83	ug/l	1
03282	Acenaphthene	83-32-9	75.	0.83	ug/l	1
03283	Fluorene	86-73-7	53.2	1.8	ug/l	10
03284	Phenanthrene	85-01-8	3.2	0.73	ug/l	10
03285	Anthracene	120-12-7	16.5	0.31	ug/l	10
03286	Fluoranthene	206-44-0	12.6	0.31	ug/l	10
03287	Pyrene	129-00-0	9.97	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	0.799	0.021	ug/l	1
03289	Chrysene	218-01-9	0.64	0.062	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	0.348	0.040	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	0.206	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	0.361	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	0.130 J	0.031	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	0.20 J	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	0.262 J	0.070	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 23:13	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 06:02	Michelle J. Kolodziejski	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 15:28	Michelle J. Kolodziejski	10



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425

Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories Sample No. WW 3409743

Collected: 06/29/2000 09:00 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

TW-05-10 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

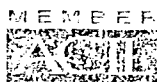
W0510 SDG#: MOS52-03

03337 PAH Water Extraction

SW-846 3510C

1 07/03/2000 12:45 John M. Becker

1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations

Lancaster Laboratories Sample No. WW 3409753

Collected: 06/29/2000 16:30 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-30S-10 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1030S SDG#: MOS52-13BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.79	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.79	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.79	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.069	ug/l	1
03285	Anthracene	120-12-7	0.070 J	0.030	ug/l	1
03286	Fluoranthene	206-44-0	0.044 J	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.059	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.037	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.0099	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.066	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 16:50	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 04:15	Michelle J. Kolodziejewski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories Sample No. WW 3409753

Collected: 06/29/2000 16:30 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-30S-10 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1030S SDG#: MOS52-13BKG



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409754

Collected: 06/29/2000 16:30 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-30S-10 Matrix Spike Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1030S SDG#: MOS52-13MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method	Units	
				Detection Limit		
08213	BTEX (8021)					
00776	Benzene	71-43-2	20.	0.20	ug/l	1
00777	Toluene	108-88-3	20.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	20.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	60.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	179.	0.86	ug/l	1
03281	Acenaphthylene	208-96-8	193.	0.86	ug/l	1
03282	Acenaphthene	83-32-9	190.	0.86	ug/l	1
03283	Fluorene	86-73-7	20.2	0.18	ug/l	1
03284	Phenanthrene	85-01-8	5.94	0.075	ug/l	1
03285	Anthracene	120-12-7	2.77	0.032	ug/l	1
03286	Fluoranthene	206-44-0	3.33	0.032	ug/l	1
03287	Pyrene	129-00-0	20.9	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	1.55	0.021	ug/l	1
03289	Chrysene	218-01-9	6.19	0.064	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	1.28	0.041	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	1.25	0.011	ug/l	1
03292	Benzo(a)pyrene	50-32-8	1.36	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	3.16	0.032	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	12.0	0.11	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	6.29	0.072	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 21:24	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 04:36	Michelle J. Kolodziejewski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1

MEMBER



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409754

Collected: 06/29/2000 16:30 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-30S-10 Matrix Spike Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1030S SDG#: MOS52-13MS

MEMBER



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409755

Collected: 06/29/2000 16:30 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-30S-10 Matrix Spike Duplicate Grab Water Sample

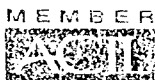
Moss-American Superfund Site - Milwaukee, WI

1030S SDG#: MOS52-13MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	20.	0.20	ug/l	1
00777	Toluene	108-88-3	20.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	20.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	60.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	157.	0.80	ug/l	1
03281	Acenaphthylene	208-96-8	169.	0.80	ug/l	1
03282	Acenaphthene	83-32-9	170.	0.80	ug/l	1
03283	Fluorene	86-73-7	17.5	0.17	ug/l	1
03284	Phenanthrene	85-01-8	5.18	0.070	ug/l	1
03285	Anthracene	120-12-7	2.44	0.030	ug/l	1
03286	Fluoranthene	206-44-0	2.90	0.030	ug/l	1
03287	Pyrene	129-00-0	18.0	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	1.34	0.020	ug/l	1
03289	Chrysene	218-01-9	5.33	0.060	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	1.11	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	1.07	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	1.17	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	2.74	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	10.3	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	5.43	0.067	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 17:29	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 04:58	Michelle J. Kolodziejwski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2621

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409755

Collected: 06/29/2000 16:30 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:43 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MW-30S-10 Matrix Spike Duplicate Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

1030S SDG#: MOS52-13MSD

MEMBER



Lancaster Laboratories

2425 New Holland Pike

PO Box 12425

Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409742

Collected: 06/29/2000 09:50 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MA3-MW31S-290600-02 Grab Water Sample

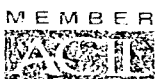
Moss-American Superfund Site - Milwaukee, WI

31502 SDG#: MOS52-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.						
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.81	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.81	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.81	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.071	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.031	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.031	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.061	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.031	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.068	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis Trial#	Date and Time	Analyst	Dilution Factor
---------	---------------	--------	-----------------	---------------	---------	-----------------



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2621

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409742

Collected: 06/29/2000 09:50 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MA3-MW31S-290600-02 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

31502	SDG#: MOS52-02					
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 22:37	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 05:41	Michelle J. Kolodziejcki	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1

MEMBER



Lancaster Laboratories

2425 New Holland Pike

PO Box 12425

Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408465

Collected: 06/28/2000 14:50 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:30 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

MA3-MW32S-0280600-02 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

32S-- SDG#: MOS50-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method		
				Detection Limit		
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 06:42	Melissa Mann	1

MEMBER



Lancaster Laboratories

2425 New Holland Pike

PO Box 12425

Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2531

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company. See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408128

Collected: 06/28/2000 14:50 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/16/00 at 03:01 AM

P.O. Box 25861

Discard: 8/16/00

Oklahoma City OK 73125

MA3-MW32S-280600-02 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

32S02 SDG#: MOS50-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01861	PAH's in Water					
03280	Naphthalene	91-20-3	40.7	0.81	ug/l	1
03281	Acenaphthylene	208-96-8	2.33 J	0.81	ug/l	1
03282	Acenaphthene	83-32-9	1.1 J	0.81	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.071	ug/l	1
03285	Anthracene	120-12-7	0.033 J	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.061	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.068	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01861	PAH's in Water	SW-846 8310	1	07/04/2000 11:08	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/01/2000 06:30	Joseph S. Feister	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408466

Collected: 06/28/2000 14:40 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:30 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

MA3-MW33S-0280600-03 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

33S-- SDG#: MOS50-07

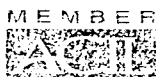
CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	1.0	ug/l	5
00777	Toluene	108-88-3	1.5 J	1.0	ug/l	5
00778	Ethylbenzene	100-41-4	9.0	1.0	ug/l	5
00779	Total Xylenes	1330-20-7	19.	3.0	ug/l	5

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Due to dilution of the sample made necessary by the high level of non-target compounds, normal quantitation limits were not attained.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 07:18	Melissa Mann	5



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408129

Collected: 06/28/2000 14:40 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/16/00 at 03:01 AM

P.O. Box 25861

Discard: 8/16/00

Oklahoma City OK 73125

MA3-MW33S-280600-03 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

33S03 SDG#: MOS50-18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01861	PAH's in Water					
03280	Naphthalene	91-20-3	1,920.	8.0	ug/l	10
03281	Acenaphthylene	208-96-8	86.8	0.80	ug/l	1
03282	Acenaphthene	83-32-9	26.	0.80	ug/l	1
03283	Fluorene	86-73-7	1.41	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.070	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.060	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.067	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01861	PAH's in Water	SW-846 8310	1	07/04/2000 11:30	Michelle J. Kolodziejski	1
01861	PAH's in Water	SW-846 8310	1	07/05/2000 15:52	Michelle J. Kolodziejski	10
03337	PAH Water Extraction	SW-846 3510C	1	07/01/2000 06:30	Joseph S. Feister	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408472

Collected: 06/28/2000 14:30 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:31 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

MA3-MW34S-280600-06 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

34S-- SDG#: MOS50-13

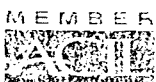
CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
08213	BTEX (8021)						
00776	Benzene	71-43-2	9.5 J	2.0		ug/l	10
00777	Toluene	108-88-3	N.D.	2.0		ug/l	10
00778	Ethylbenzene	100-41-4	22.	2.0		ug/l	10
00779	Total Xylenes	1330-20-7	71.	6.0		ug/l	10

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Due to dilution of the sample made necessary by the high level of non-target compounds, normal quantitation limits were not attained.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 07:55	Melissa Mann	10



Lancaster Laboratories
2425 New Holland Pike
PO Box 12423
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2631

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408132

Collected: 06/28/2000 14:30 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/16/00 at 03:01 AM

P.O. Box 25861

Discard: 8/16/00

Oklahoma City OK 73125

MA3-MW34S-280600-06 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

34S06 SDG#: MOS50-21*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01861	PAH's in Water					
03280	Naphthalene	91-20-3	5,980.	79.	ug/l	100
03281	Acenaphthylene	208-96-8	245. J	79.	ug/l	100
03282	Acenaphthene	83-32-9	170. J	79.	ug/l	100
03283	Fluorene	86-73-7	89.	17.	ug/l	100
03284	Phenanthrene	85-01-8	82.	6.9	ug/l	100
03285	Anthracene	120-12-7	11.3 J	3.0	ug/l	100
03286	Fluoranthene	206-44-0	10.4 J	3.0	ug/l	100
03287	Pyrene	129-00-0	N.D.	17.	ug/l	100
03288	Benzo(a)anthracene	56-55-3	N.D.	2.0	ug/l	100
03289	Chrysene	218-01-9	N.D.	5.9	ug/l	100
03290	Benzo(b)fluoranthene	205-99-2	N.D.	3.8	ug/l	100
03291	Benzo(k)fluoranthene	207-08-9	N.D.	1.0	ug/l	100
03292	Benzo(a)pyrene	50-32-8	N.D.	2.0	ug/l	100
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	3.0	ug/l	100
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	9.9	ug/l	100
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	6.6	ug/l	100

Due to the presence of PAHs in the sample, a dilution was used for analysis. The Limits of Quantitation (LOQ's) were raised accordingly.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01861	PAH's in Water	SW-846 8310	1	07/06/2000 16:19	Michelle J. Kolodziejcki	100
03337	PAH Water Extraction	SW-846 3510C	1	07/01/2000 06:30	Joseph S. Feister	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408468

Collected: 06/28/2000 15:45 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:30 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

MA3-MW35S-0280600-05 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

35S-- SDG#: MOS50-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 09:44	Melissa Mann	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408131

Collected: 06/28/2000 15:45 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/16/00 at 03:01 AM

P.O. Box 25861

Discard: 8/16/00

Oklahoma City OK 73125

MA3-MW35S-280600-05 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

35S05 SDG#: MOS50-20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01861	PAH's in Water					
03280	Naphthalene	91-20-3	42.7	0.77	ug/l	1
03281	Acenaphthylene	208-96-8	6.18 J	0.77	ug/l	1
03282	Acenaphthene	83-32-9	14.	0.77	ug/l	1
03283	Fluorene	86-73-7	4.92	0.16	ug/l	1
03284	Phenanthrene	85-01-8	2.84	0.067	ug/l	1
03285	Anthracene	120-12-7	2.02	0.029	ug/l	1
03286	Fluoranthene	206-44-0	2.77	0.029	ug/l	1
03287	Pyrene	129-00-0	2.14	0.16	ug/l	1
03288	Benzo(a)anthracene	56-55-3	0.272	0.019	ug/l	1
03289	Chrysene	218-01-9	0.166 J	0.057	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	0.171	0.036	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	0.078	0.0096	ug/l	1
03292	Benzo(a)pyrene	50-32-8	0.162	0.019	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.029	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	0.107 J	0.096	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	0.117 J	0.064	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01861	PAH's in Water	SW-846 8310	1	07/04/2000 12:13	Michelle J. Kolodziejcki	1
03337	PAH Water Extraction	SW-846 3510C	1	07/01/2000 06:30	Joseph S. Feister	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409745

Collected: 06/29/2000 14:00 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

MA3-MW36S-290600-01 Grab Water Sample

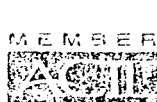
Moss-American Superfund Site - Milwaukee, WI

36S01 SDG#: MOS52-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.82	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.82	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.82	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.071	ug/l	1
03285	Anthracene	120-12-7	0.038 J	0.031	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.031	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.061	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.031	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.068	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/04/2000 00:26	Steven J. Stabinger	1
01861	PAH's in Water	SW-846 8310	1	07/06/2000 06:45	Michelle J. Kolodziejwski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 12:45	John M. Becker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409745

Collected: 06/29/2000 14:00 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

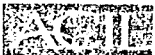
Oklahoma City OK 73125

MA3-MW36S-290600-01 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

36S01 SDG#: MOS52-05

MEMBER



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408130

Collected: 06/28/2000 11:30 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/16/00 at 03:01 AM

P.O. Box 25861

Discard: 8/16/00

Oklahoma City OK 73125

MA3-MW37S-280600-04 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

37S04 SDG#: MOS50-19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.79	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.79	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.79	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.17	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.069	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.030	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.030	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.17	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.059	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.0099	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.030	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.066	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01861	PAH's in Water	SW-846 8310	1	07/04/2000 11:51	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/01/2000 06:30	Joseph S. Feister	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408474

Collected: 06/27/2000 16:20 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:31 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

FB01 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

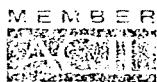
01FB- SDG#: MOS50-15FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 06:06	Melissa Mann	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425

Lancaster, PA 17605-2425

717-656-2399 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company. See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3408473

Collected: 06/27/2000 16:30 by BK

Account Number: 07802

Submitted: 06/29/2000 09:35

Kerr-McGee Corporation

Reported: 07/20/00 at 02:31 PM

P.O. Box 25861

Discard: 8/20/00

Oklahoma City OK 73125

FB02 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

FB02- SDG#: MOS50-14FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Sufficient sample volume was not available to perform a MSD for this analysis. However, a MS was performed. In addition, a LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/02/2000 05:29	Melissa Mann	1

MEMBER



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425

Lancaster, PA 17605-2425

717-656-2300 Fax 717-656-2661

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc. a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409746

Collected: 06/27/2000 16:20 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

FB-01 Grab Water Sample

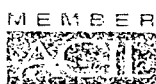
Moss-American Superfund Site - Milwaukee, WI

MAFB1 SDG#: MOS52-06FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.86	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.86	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.86	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.075	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.032	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.032	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.022	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.065	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.022	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.032	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.072	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01861	PAH's in Water	SW-846 8310	1	07/04/2000 03:53	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 00:20	Darin P. Wagner	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3409747

Collected: 06/27/2000 16:30 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

FB-02 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

MAFB2 SDG#: MOS52-07FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.84	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.84	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.84	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.073	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.031	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.031	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.063	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.031	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.070	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01861	PAH's in Water	SW-846 8310	1	07/04/2000 04:15	Michelle J. Kolodziejcki	1
03337	PAH Water Extraction	SW-846 3510C	1	07/03/2000 00:20	Darin P. Wagner	1

Lancaster Laboratories Sample No. WW 3410376

Collected: 06/29/2000 16:30 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

FB-03 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

FB03- SDG#: MAS02-08FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Dilution Factor
				Method	Units	
				Detection Limit		
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.83	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.83	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.83	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.072	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.031	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.031	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.062	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.031	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.069	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 10:42	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/11/2000 01:34	Michelle J. Kolodziejwski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410376

Collected: 06/29/2000 16:30 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

FB-03 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

FB03- SDG#: MAS02-08FB



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3410377

Collected: 06/29/2000 16:25 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

FB-04 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

FB04- SDG#: MAS02-09FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
01861	PAH's in Water					
03280	Naphthalene	91-20-3	N.D.	0.87	ug/l	1
03281	Acenaphthylene	208-96-8	N.D.	0.87	ug/l	1
03282	Acenaphthene	83-32-9	N.D.	0.87	ug/l	1
03283	Fluorene	86-73-7	N.D.	0.18	ug/l	1
03284	Phenanthrene	85-01-8	N.D.	0.076	ug/l	1
03285	Anthracene	120-12-7	N.D.	0.032	ug/l	1
03286	Fluoranthene	206-44-0	N.D.	0.032	ug/l	1
03287	Pyrene	129-00-0	N.D.	0.18	ug/l	1
03288	Benzo(a)anthracene	56-55-3	N.D.	0.022	ug/l	1
03289	Chrysene	218-01-9	N.D.	0.065	ug/l	1
03290	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
03291	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	ug/l	1
03292	Benzo(a)pyrene	50-32-8	N.D.	0.022	ug/l	1
03293	Dibenzo(a,h)anthracene	53-70-3	N.D.	0.032	ug/l	1
03294	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
03295	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.073	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 11:15	Barry R. Shoemaker	1
01861	PAH's in Water	SW-846 8310	1	07/11/2000 02:17	Michelle J. Kolodziejski	1
03337	PAH Water Extraction	SW-846 3510C	1	07/05/2000 19:30	Kristi L. Hippey	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425

Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories
Where quality is a science.

Page 2 of 3

Lancaster Laboratories Sample No. WW 3410378

Collected: 06/29/2000 16:50 by JK

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

FB-05 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

FB05- SDG#: MAS02-10FB



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2631

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

2216 Rev. 23

Lancaster Laboratories Sample No. WW 3409748

Collected: 06/29/2000 00:00 by BK

Account Number: 07802

Submitted: 06/30/2000 09:20

Kerr-McGee Corporation

Reported: 07/18/00 at 07:42 AM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

Trip Blank Grab Water Sample

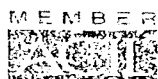
Moss-American Superfund Site - Milwaukee, WI

MA-TB SDG#: MOS52-08TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/03/2000 16:12	Steven J. Stabinger	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories Sample No. WW 3413617

Collected: 07/07/2000 16:00

Account Number: 07802

Submitted: 07/10/2000 09:10

Kerr-McGee Corporation

Reported: 07/19/00 at 11:14 PM

P.O. Box 25861

Discard: 8/19/00

Oklahoma City OK 73125

Trip Blank Grab Water Sample

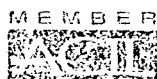
Moss American Superfund Site - Milwaukee, WI

TRIPB SDG#: MOS63-02TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/12/2000 08:12	Melissa Mann	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster PA 17605-2425
717-656-2200 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories
Where quality is a science.

ANALYTICAL RESULTS

Prepared for:

Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

Prepared by:

Lancaster Laboratories
 2425 New Holland Pike
 Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 721796. Samples arrived at the laboratory on Monday, July 10, 2000.

Client Description

MW-20S-10 Grab Water Sample
 Trip Blank Grab Water Sample

Lancaster Labs Number

3413616
 3413617

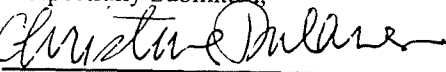
METHODOLOGY

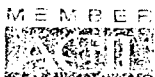
The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO Kerr-McGee Corporation
 1 COPY TO Roy F. Weston
 1 COPY TO Data Package Group

Attn: Dr. Jeff Ostmeyer
 Attn: Mr. Tom Graan

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300.

Respectfully Submitted,




Lancaster Laboratories
 2425 New Holland Pike
 P.O. Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2631

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company. See reverse side for explanation of symbols and abbreviations.



ANALYTICAL RESULTS

Prepared for:

Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 720685. Samples arrived at the laboratory on Thursday, June 29, 2000. The PO# for this group is MOSS-AMERICAN.

Table with 2 columns: Client Description and Lancaster Labs Number. Lists 6 grab water samples with their respective IDs and lab numbers.

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO Kerr-McGee Corporation Attn: Dr. Jeff Ostmeyer
1 COPY TO Roy F. Weston Attn: Mr. Tom Graan
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300.

Respectfully Submitted,
Christine D. [Signature]



Lancaster Laboratories

Where quality is a science.

ANALYTICAL RESULTS

Prepared for:

Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 720959. Samples arrived at the laboratory on Friday, June 30, 2000. The PO# for this group is MOSS-AMERICAN.

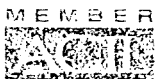
<u>Client Description</u>	<u>Lancaster Labs Number</u>
MW-28S-10 Grab Water Sample	3409741
MA3-MW31S-290600-02 Grab Water Sample	3409742
TW-05-10 Grab Water Sample	3409743
MW-27S-10 Grab Water Sample	3409744
MA3-MW36S-290600-01 Grab Water Sample	3409745
FB-01 Grab Water Sample	3409746
FB-02 Grab Water Sample	3409747
Trip Blank Grab Water Sample	3409748
MW-6S-10 Grab Water Sample	3409749
MW-29S-10 Grab Water Sample	3409750
MW-9S-10 Grab Water Sample	3409751
MW-10S-10 Grab Water Sample	3409752
MW-30S-10 Unspiked Grab Water Sample	3409753
MW-30S-10 Matrix Spike Grab Water Sample	3409754
MW-30S-10 Matrix Spike Duplicate Grab Water Sample	3409755
MW-29S-10 Grab Water Sample	3409756
MW-9S-10DP Grab Water Sample	3409757

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO Kerr-McGee Corporation
1 COPY TO Roy F. Weston
1 COPY TO Data Package Group

Attn: Dr. Jeff Ostmeyer
Attn: Mr. Tom Graan



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-556-2300 Fax: 717-656-2691

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company. See reverse side for explanation of symbols and abbreviations.



Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300.

Respectfully Submitted,

Michelle M Turner

MEMBER



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



ANALYTICAL RESULTS

Prepared for:

Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 721092. Samples arrived at the laboratory on Saturday, July 01, 2000. The PO# for this group is MOSS-AMERICAN.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
MW-4S-10 Unspiked Grab Water Sample	3410367
MW-4S-10 Matrix Spike Grab Water Sample	3410368
MW-4S-10 Matrix Spike Dup. Grab Water Sample	3410369
MW-13S-10 Grab Water Sample	3410370
MW-25S-10 Grab Water Sample	3410371
MW-25S-10 Dup. Grab Water Sample	3410372
MW-5S-10 Grab Water Sample	3410373
MW-3S-10 Grab Water Sample	3410374
MW-26S-10 Grab Water Sample	3410375
FB-03 Field Blank Grab Water Sample	3410376
FB-04 Field Blank Grab Water Sample	3410377
FB-05 Field Blank Grab Water Sample	3410378
Trip Blank Water Sample	3410379

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

1 COPY TO Kerr-McGee Corporation
1 COPY TO Roy F. Weston
1 COPY TO Data Package Group

Attn: Dr. Jeff Ostmeyer
Attn: Mr. Tom Graan



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300.

Respectfully Submitted,

Christine M. Hower



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/16/00 at 03:01 AM

Group Number: 720685

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 001820014A	Sample number(s): 3408127-3408132							
Naphthalene	N.D.	.8	ug/l	65		45-111		
Acenaphthylene	N.D.	.8	ug/l	71		59-114		
Acenaphthene	N.D.	.8	ug/l	75		50-120		
Fluorene	N.D.	.17	ug/l	79		64-117		
Phenanthrene	N.D.	.07	ug/l	83		75-114		
Anthracene	N.D.	.03	ug/l	81		53-112		
Fluoranthene	N.D.	.03	ug/l	98		75-120		
Pyrene	N.D.	.17	ug/l	93		74-118		
Benzo(a)anthracene	N.D.	.02	ug/l	94		73-117		
Chrysene	N.D.	.06	ug/l	96		68-125		
Benzo(b)fluoranthene	N.D.	.038	ug/l	99		71-123		
Benzo(k)fluoranthene	N.D.	.01	ug/l	97		75-118		
Benzo(a)pyrene	N.D.	.02	ug/l	93		61-127		
Dibenzo(a,h)anthracene	N.D.	.03	ug/l	100		71-121		
Benzo(g,h,i)perylene	N.D.	.1	ug/l	96		70-125		
Indeno(1,2,3-cd)pyrene	N.D.	.067	ug/l	100		73-125		

Sample Matrix Quality Control

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 001820014A	Sample number(s): 3408127-3408132								
Naphthalene	86	82	59-108	5	30				
Acenaphthylene	91	87	38-134	4	30				
Acenaphthene	89	88	48-127	0	30				
Fluorene	94	92	61-122	2	30				
Phenanthrene	92	91	67-122	1	30				
Anthracene	86	85	61-107	1	30				
Fluoranthene	98	99	64-126	2	30				
Pyrene	95	96	80-125	2	30				
Benzo(a)anthracene	94	97	54-130	3	30				
Chrysene	95	96	49-140	2	30				
Benzo(b)fluoranthene	97	100	59-132	5	30				
Benzo(k)fluoranthene	93	96	72-120	5	30				
Benzo(a)pyrene	91	95	36-147	5	30				
Dibenzo(a,h)anthracene	97	100	69-122	4	30				
Benzo(g,h,i)perylene	94	98	62-131	4	30				
Indeno(1,2,3-cd)pyrene	96	100	71-128	6	30				

Surrogate Quality Control

Analysis Name: PAH's in Water
Batch number: 001820014A

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/16/00 at 03:01 AM

Group Number: 720685

Surrogate Quality Control

	Nitrobenzene	Triphenylene
3408127	79	97
3408128	86	98
3408129	86	101
3408130	84	96
3408131	86	106
3408132	72	133
Blank	91	105
LCS	77	99
MS	86	98
MSD	85	99
Limits:	29-136	33-139

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2691

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/19/00 at 11:14 PM

Group Number: 721796

Laboratory Compliance Quality Control

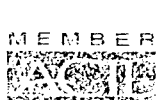
<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS D %REC</u>	<u>LCS/LCS D Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 001930005A	Sample number(s): 3413616							
Naphthalene	N.D.	.8	ug/l	92		45-111		
Acenaphthylene	N.D.	.8	ug/l	95		59-114		
Acenaphthene	N.D.	.8	ug/l	91		50-120		
Fluorene	N.D.	.17	ug/l	99		64-117		
Phenanthrene	N.D.	.07	ug/l	100		75-114		
Anthracene	0.033 J	.03	ug/l	89		53-112		
Fluoranthene	N.D.	.03	ug/l	110		75-120		
Pyrene	N.D.	.17	ug/l	101		74-118		
Benzo(a)anthracene	N.D.	.02	ug/l	101		73-117		
Chrysene	N.D.	.06	ug/l	103		68-125		
Benzo(b)fluoranthene	N.D.	.038	ug/l	105		71-123		
Benzo(k)fluoranthene	N.D.	.01	ug/l	102		75-118		
Benzo(a)pyrene	N.D.	.02	ug/l	102		61-127		
Dibenzo(a,h)anthracene	N.D.	.03	ug/l	105		71-121		
Benzo(g,h,i)perylene	N.D.	.1	ug/l	98		70-125		
Indeno(1,2,3-cd)pyrene	N.D.	.067	ug/l	103		73-125		
Batch number: 00193A55	Sample number(s): 3413616-3413617							
Benzene	N.D.	.2	ug/l	107		79-119		
Toluene	N.D.	.2	ug/l	112		81-118		
Ethylbenzene	N.D.	.2	ug/l	117		80-118		
Total Xylenes	N.D.	.6	ug/l	118		81-118		

Sample Matrix Quality Control

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 001930005A	Sample number(s): 3413616								
Naphthalene	92	88	59-108	3	30				
Acenaphthylene	97	92	38-134	4	30				
Acenaphthene	93	90	48-127	2	30				
Fluorene	101	97	61-122	3	30				
Phenanthrene	100	96	67-122	2	30				
Anthracene	90	84	61-107	5	30				
Fluoranthene	109	105	64-126	2	30				
Pyrene	101	98	80-125	1	30				
Benzo(a)anthracene	101	98	54-130	2	30				
Chrysene	102	99	49-140	1	30				
Benzo(b)fluoranthene	101	100	59-132	0	30				
Benzo(k)fluoranthene	98	96	72-120	0	30				
Benzo(a)pyrene	98	97	36-147	0	30				
Dibenzo(a,h)anthracene	100	98	69-122	0	30				
Benzo(g,h,i)perylene	94	92	62-131	0	30				
Indeno(1,2,3-cd)pyrene	99	97	71-128	0	30				
Batch number: 00193A55	Sample number(s): 3413616-3413617								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-556-2300 Fax: 717-556-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/19/00 at 11:14 PM

Group Number: 721796

Sample Matrix Quality Control

Analysis Name	MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD
	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>
Benzene	105	109	77-129	4	30			
Toluene	112	115	87-124	3	30			
Ethylbenzene	113	118	80-130	4	30			
Total Xylenes	113	117	75-133	4	30			

Surrogate Quality Control

Analysis Name: PAH's in Water
Batch number: 001930005A
Nitrobenzene

Triphenylene

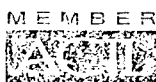
3413616	96	108
Blank	87	103
LCS	93	108
MS	87	106
MSD	91	103
Limits:	29-136	33-139

Analysis Name: BTEX (8021)
Batch number: 00193A55
Trifluorotoluene-P

3413616	99
3413617	100
Blank	99
LCS	100
MS	99
MSD	102
Limits:	69-132

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17609-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/18/00 at 04:55 PM

Group Number: 721092

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 001870014A	Sample number(s): 3410367-3410378							
Naphthalene	N.D.	.8	ug/l	60		45-111		
Acenaphthylene	N.D.	.8	ug/l	74		59-114		
Acenaphthene	N.D.	.8	ug/l	76		50-120		
Fluorene	N.D.	.17	ug/l	85		64-117		
Phenanthrene	N.D.	.07	ug/l	89		75-114		
Anthracene	N.D.	.03	ug/l	81		53-112		
Fluoranthene	N.D.	.03	ug/l	102		75-120		
Pyrene	N.D.	.17	ug/l	97		74-118		
Benzo(a)anthracene	N.D.	.02	ug/l	95		73-117		
Chrysene	N.D.	.06	ug/l	99		68-125		
Benzo(b)fluoranthene	N.D.	.038	ug/l	100		71-123		
Benzo(k)fluoranthene	N.D.	.01	ug/l	95		75-118		
Benzo(a)pyrene	N.D.	.02	ug/l	102		61-127		
Dibenzo(a,h)anthracene	N.D.	.03	ug/l	101		71-121		
Benzo(g,h,i)perylene	N.D.	.1	ug/l	98		70-125		
Indeno(1,2,3-cd)pyrene	N.D.	.067	ug/l	95		73-125		
Batch number: 00187A66	Sample number(s): 3410367-3410379							
Benzene	N.D.	.2	ug/l	104	102	79-119	2	30
Toluene	N.D.	.2	ug/l	104	101	81-118	3	30
Ethylbenzene	N.D.	.2	ug/l	104	101	80-118	3	30
Total Xylenes	N.D.	.6	ug/l	104	101	81-118	3	30

Sample Matrix Quality Control

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 001870014A	Sample number(s): 3410367-3410378								
Naphthalene	100	82	59-108	11	30				
Acenaphthylene	69	56	38-134	20	30				
Acenaphthene	128*	94	48-127	13	30				
Fluorene	(2)	(2)	61-122	10	30				
Phenanthrene	28*	29*	67-122	2	30				
Anthracene	(2)	(2)	61-107	2	30				
Fluoranthene	(2)	(2)	64-126	5	30				
Pyrene	110	149*	80-125	6	30				
Benzo(a)anthracene	127	(2)	54-130	13	30				
Chrysene	85	95	49-140	0	30				
Benzo(b)fluoranthene	90	138*	59-132	13	30				
Benzo(k)fluoranthene	90	117	72-120	8	30				
Benzo(a)pyrene	94	128	36-147	9	30				
Dibenzo(a,h)anthracene	66*	64*	69-122	17	30				
Benzo(g,h,i)perylene	57*	58*	62-131	12	30				
Indeno(1,2,3-cd)pyrene	50*	77	71-128	31*	30				
Batch number: 00187A66	Sample number(s): 3410367-3410379								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
 See reverse side for explanation of symbols and abbreviations.



Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/18/00 at 04:55 PM

Group Number: 721092

Sample Matrix Quality Control

Analysis Name	MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD Max
	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>
Benzene	112	106	77-129	5	30			
Toluene	109	90	87-124	14	30			
Ethylbenzene	109	84	80-130	18	30			
Total Xylenes	110	95	75-133	11	30			

Surrogate Quality Control

Analysis Name: PAH's in Water
Batch number: 001870014A

	Nitrobenzene	Triphenylene
3410367	79	251*
3410368	80	224*
3410369	77	268*
3410370	78	99
3410371	71	90
3410372	79	103
3410373	81	105
3410374	84	102
3410375	145*	178*
3410376	72	95
3410377	72	91
3410378	80	100
Blank	77	102
LCS	85	103
MS	80	224*
MSD	77	268*
Limits:	29-136	33-139

Analysis Name: BTEX (8021)
Batch number: 00187A66
Trifluorotoluene-P

3410367	98
3410368	99
3410369	100
3410370	101
3410371	104
3410372	104
3410373	101
3410374	102
3410375	101
3410376	99
3410377	99
3410378	98
3410379	99
Blank	99

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-556-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories

Where quality is a science.

Page 3 of 3

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/18/00 at 04:55 PM

Group Number: 721092

Surrogate Quality Control

LCS	99
LCSD	99
MS	99
MSD	100

Limits: 69-132

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

2216 Rev. 3/2

Lancaster Laboratories Sample No. WW 3410379

Collected: n.a.

Account Number: 07802

Submitted: 07/01/2000 09:50

Kerr-McGee Corporation

Reported: 07/18/00 at 04:55 PM

P.O. Box 25861

Discard: 8/18/00

Oklahoma City OK 73125

Trip Blank Water Sample

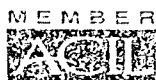
Moss-American Superfund Site - Milwaukee, WI

630TB SDG#: MAS02-11TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.20	ug/l	1
00777	Toluene	108-88-3	N.D.	0.20	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	07/06/2000 12:22	Barry R. Shoemaker	1



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425

Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/18/00 at 07:43 AM

Group Number: 720959

Laboratory Compliance Quality Control

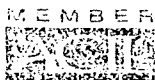
<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 001840002A	Sample number(s): 3409746-3409747							
Naphthalene	N.D.	.8	ug/l	69		45-111		
Acenaphthylene	N.D.	.8	ug/l	86		59-114		
Acenaphthene	N.D.	.8	ug/l	85		50-120		
Fluorene	N.D.	.17	ug/l	94		64-117		
Phenanthrene	N.D.	.07	ug/l	96		75-114		
Anthracene	N.D.	.03	ug/l	91		53-112		
Fluoranthene	N.D.	.03	ug/l	105		75-120		
Pyrene	N.D.	.17	ug/l	99		74-118		
Benzo(a)anthracene	N.D.	.02	ug/l	99		73-117		
Chrysene	0.104 J	.06	ug/l	100		68-125		
Benzo(b)fluoranthene	N.D.	.038	ug/l	102		71-123		
Benzo(k)fluoranthene	N.D.	.01	ug/l	99		75-118		
Benzo(a)pyrene	N.D.	.02	ug/l	95		61-127		
Dibenzo(a,h)anthracene	N.D.	.03	ug/l	103		71-121		
Benzo(g,h,i)perylene	N.D.	.1	ug/l	100		70-125		
Indeno(1,2,3-cd)pyrene	N.D.	.067	ug/l	103		73-125		
Batch number: 001850000A	Sample number(s): 3409741-3409745,3409749-3409757							
Naphthalene	N.D.	.8	ug/l	63		45-111		
Acenaphthylene	N.D.	.8	ug/l	73		59-114		
Acenaphthene	N.D.	.8	ug/l	71		50-120		
Fluorene	N.D.	.17	ug/l	83		64-117		
Phenanthrene	N.D.	.07	ug/l	90		75-114		
Anthracene	N.D.	.03	ug/l	81		53-112		
Fluoranthene	N.D.	.03	ug/l	101		75-120		
Pyrene	N.D.	.17	ug/l	95		74-118		
Benzo(a)anthracene	N.D.	.02	ug/l	95		73-117		
Chrysene	N.D.	.06	ug/l	95		68-125		
Benzo(b)fluoranthene	N.D.	.038	ug/l	99		71-123		
Benzo(k)fluoranthene	N.D.	.01	ug/l	96		75-118		
Benzo(a)pyrene	N.D.	.02	ug/l	83		61-127		
Dibenzo(a,h)anthracene	N.D.	.03	ug/l	98		71-121		
Benzo(g,h,i)perylene	N.D.	.1	ug/l	92		70-125		
Indeno(1,2,3-cd)pyrene	N.D.	.067	ug/l	97		73-125		
Batch number: 00185A56	Sample number(s): 3409741-3409745,3409748-3409757							
Benzene	N.D.	.2	ug/l	91	96	79-119	5	30
Toluene	N.D.	.2	ug/l	93	98	81-118	5	30
Ethylbenzene	N.D.	.2	ug/l	96	101	80-118	6	30
Total Xylenes	N.D.	.6	ug/l	95	100	81-118	5	30

Sample Matrix Quality Control

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 001840002A	Sample number(s): 3409746-3409747								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2621

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/18/00 at 07:43 AM

Group Number: 720959

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD RPD	BKG MAX	DUP Conc	DUP Conc	DUP RPD	Dup RPD Max
Naphthalene	89	92	59-108	4	30				
Acenaphthylene	70	70	38-134	0	30				
Acenaphthene	109	110	48-127	1	30				
Fluorene	101	101	61-122	0	30				
Phenanthrene	(2)	(2)	67-122	3	30				
Anthracene	39*	60*	61-107	6	30				
Fluoranthene	40*	58*	64-126	8	30				
Pyrene	78*	81	80-125	3	30				
Benzo(a)anthracene	40*	52*	54-130	8	30				
Chrysene	85	89	49-140	5	30				
Benzo(b)fluoranthene	63	70	59-132	6	30				
Benzo(k)fluoranthene	74	78	72-120	3	30				
Benzo(a)pyrene	48	55	36-147	6	30				
Dibenzo(a,h)anthracene	95	97	69-122	2	30				
Benzo(g,h,i)perylene	86	87	62-131	2	30				
Indeno(1,2,3-cd)pyrene	91	89	71-128	1	30				
Batch number: 001850000A Sample number(s): 3409741-3409745, 3409749-3409757									
Naphthalene	83	78	59-108	13	30				
Acenaphthylene	90	84	38-134	13	30				
Acenaphthene	89	83	48-127	14	30				
Fluorene	94	87	61-122	14	30				
Phenanthrene	92	86	67-122	14	30				
Anthracene	84	79	61-107	13	30				
Fluoranthene	102	95	64-126	14	30				
Pyrene	97	90	80-125	15	30				
Benzo(a)anthracene	96	89	54-130	14	30				
Chrysene	96	88	49-140	15	30				
Benzo(b)fluoranthene	99	92	59-132	14	30				
Benzo(k)fluoranthene	97	89	72-120	15	30				
Benzo(a)pyrene	84	77	36-147	15	30				
Dibenzo(a,h)anthracene	98	91	69-122	14	30				
Benzo(g,h,i)perylene	93	85	62-131	15	30				
Indeno(1,2,3-cd)pyrene	98	90	71-128	15	30				
Batch number: 00185A56 Sample number(s): 3409741-3409745, 3409748-3409757									
Benzene	99	98	77-129	1	30				
Toluene	101	99	87-124	1	30				
Ethylbenzene	102	102	80-130	1	30				
Total Xylenes	101	100	75-133	1	30				

Surrogate Quality Control

Analysis Name: PAH's in Water
Batch number: 001840002A
Nitrobenzene

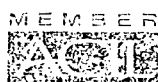
Triphenylene

3409746 90

103

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/18/00 at 07:43 AM

Group Number: 720959

Surrogate Quality Control

3409747	91	107
Blank	89	104
LCS	89	104
MS	76	117
MSD	76	121

Limits: 29-136 33-139

Analysis Name: PAH's in Water

Batch number: 001850000A

Nitrobenzene

Triphenylene

3409741	84	96
3409742	44	54
3409743	87	119
3409744	84	99
3409745	84	96
3409749	85	98
3409750	82	92
3409751	87	97
3409752	86	97
3409753	79	94
3409754	91	104
3409755	83	96
3409756	86	98
3409757	82	93
Blank	85	100
LCS	90	103
MS	91	104
MSD	83	96

Limits: 29-136 33-139

Analysis Name: BTEX (8021)

Batch number: 00185A56

Trifluorotoluene-P

3409741	97
3409742	96
3409743	96
3409744	95
3409745	94
3409748	96
3409749	96
3409750	93
3409751	94
3409752	93
3409753	96
3409754	97
3409755	96
3409756	93
3409757	95
Blank	94
LCS	96
LCSD	96

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories

2425 New Holland Pike

PO Box 12425

Lancaster, PA 17605-2425

717-656-2300 Fax: 717-656-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company. See reverse side for explanation of symbols and abbreviations.



Lancaster Laboratories

Where quality is a science.

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/18/00 at 07:43 AM

Group Number: 720959

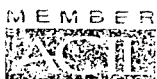
Surrogate Quality Control

MS 97
MSD 96

Limits: 69-132

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2661

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.



Client Name: Kerr-McGee Corporation
 Reported: 07/20/00 at 02:31 PM

Group Number: 720748

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 00181105101B Nitrite Nitrogen	Sample number(s): 3408462 N.D. .015 mg/l			102		90-110		
Batch number: 001820014A	Sample number(s): 3408460-3408461							
Naphthalene	N.D.	.8	ug/l	65		45-111		
Acenaphthylene	N.D.	.8	ug/l	71		59-114		
Acenaphthene	N.D.	.8	ug/l	75		50-120		
Fluorene	N.D.	.17	ug/l	79		64-117		
Phenanthrene	N.D.	.07	ug/l	83		75-114		
Anthracene	N.D.	.03	ug/l	81		53-112		
Fluoranthene	N.D.	.03	ug/l	98		75-120		
Pyrene	N.D.	.17	ug/l	93		74-118		
Benzo(a)anthracene	N.D.	.02	ug/l	94		73-117		
Chrysene	N.D.	.06	ug/l	96		68-125		
Benzo(b)fluoranthene	N.D.	.038	ug/l	99		71-123		
Benzo(k)fluoranthene	N.D.	.01	ug/l	97		75-118		
Benzo(a)pyrene	N.D.	.02	ug/l	93		61-127		
Dibenzo(a,h)anthracene	N.D.	.03	ug/l	100		71-121		
Benzo(g,h,i)perylene	N.D.	.1	ug/l	96		70-125		
Indeno(1,2,3-cd)pyrene	N.D.	.067	ug/l	100		73-125		
Batch number: 00183A55	Sample number(s): 3408460-3408461, 3408463-3408468, 3408472-3408474							
Benzene	N.D.	.2	ug/l	102	99	79-119	4	30
Toluene	N.D.	.2	ug/l	106	101	81-118	5	30
Ethylbenzene	N.D.	.2	ug/l	106	102	80-118	4	30
Total Xylenes	N.D.	.6	ug/l	106	102	81-118	3	30
Batch number: 00188043612A	Sample number(s): 3408469							
Total Organic Carbon	N.D.	.4	mg/l	100		93-103		
Batch number: 00188043613A	Sample number(s): 3408470-3408471							
Total Organic Carbon	N.D.	.4	mg/l	100		93-103		
Batch number: 00188106102A	Sample number(s): 3408462							
Nitrate Nitrogen	N.D.	.03	mg/l	105		90-110		

Sample Matrix Quality Control

<u>Analysis Name</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Dup RPD Max</u>
Batch number: 00181105101B Nitrite Nitrogen	101	101	90-110	0	3	N.D.	N.D.	0 (1)	6
Batch number: 001820014A	Sample number(s): 3408460-3408461								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 72425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-655-2681

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company
 See reverse side for explanation of symbols and abbreviations.



Client Name: Kerr-McGee Corporation
 Reported: 07/20/00 at 02:31 PM

Group Number: 720748

Sample Matrix Quality Control

Analysis Name	MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD
	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Naphthalene	86	82	59-108	5	30			
Acenaphthylene	91	87	38-134	4	30			
Acenaphthene	89	88	48-127	0	30			
Fluorene	94	92	61-122	2	30			
Phenanthrene	92	91	67-122	1	30			
Anthracene	86	85	61-107	1	30			
Fluoranthene	98	99	64-126	2	30			
Pyrene	95	96	80-125	2	30			
Benzo(a)anthracene	94	97	54-130	3	30			
Chrysene	95	96	49-140	2	30			
Benzo(b)fluoranthene	97	100	59-132	5	30			
Benzo(k)fluoranthene	93	96	72-120	5	30			
Benzo(a)pyrene	91	95	36-147	5	30			
Dibenzo(a,h)anthracene	97	100	69-122	4	30			
Benzo(g,h,i)perylene	94	98	62-131	4	30			
Indeno(1,2,3-cd)pyrene	96	100	71-128	6	30			

Batch number: 00183A55 Sample number(s): 3408460-3408461, 3408463-3408468, 3408472-3408474

Benzene	108	77-129					
Toluene	112	87-124					
Ethylbenzene	112	80-130					
Total Xylenes	111	75-133					

Batch number: 00188043612A Sample number(s): 3408469

Total Organic Carbon	102	73-126		0.57 J	N.D.	78* (1)	3
----------------------	-----	--------	--	--------	------	---------	---

Batch number: 00188043613A Sample number(s): 3408470-3408471

Total Organic Carbon	103	99	73-126	4*	3	4.2	N.D.	200* (1)	3
----------------------	-----	----	--------	----	---	-----	------	----------	---

Batch number: 00188106102A Sample number(s): 3408462

Nitrate Nitrogen	109	90-110		24.0	23.1	4*			3
------------------	-----	--------	--	------	------	----	--	--	---

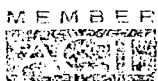
Surrogate Quality Control

Analysis Name: PAH's in Water
 Batch number: 001820014A

	Nitrobenzene	Triphenylene
3408460	85	98
3408461	87	101
Blank	91	105
LCS	77	99
MS	86	98
MSD	85	99

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2661

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
 See reverse side for explanation of symbols and abbreviations.



Client Name: Kerr-McGee Corporation
Reported: 07/20/00 at 02:31 PM

Group Number: 720748

Surrogate Quality Control

Limits: 29-136 33-139

Analysis Name: BTEX (8021)
Batch number: 00183A55
Trifluorotoluene-P

3408460	95
3408461	99
3408463	99
3408464	99
3408465	96
3408466	102
3408467	98
3408468	101
3408472	103
3408473	97
3408474	98
Blank	100
LCS	99
LCSD	102
MS	101

Limits: 69-132

***- Outside of specification**

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17505-2425
717-656-2300 Fax: 717-656-2581

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc., a Thermo Electron Company.
See reverse side for explanation of symbols and abbreviations.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 7802 Sample # 340367-79

Please print. Instructions on reverse side correspond with circled numbers.

Client: <u>Kerr - McGee</u> Acct. #: _____ Project Name/#: <u>Moss American</u> PWSID #: _____ Project Manager: <u>Tom Grazan</u> P.O.# _____ Sampler: <u>Joe Klamp / Weston</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>				Matrix 4 <input type="checkbox"/> Potable (check if applicable) <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other			Analyses Requested 5 <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> BTEX 8021 PAHs 8310 </div> <div style="border: 1px solid black; padding: 5px; width: 80%;"> C.O.C. #1682 </div> </div>					For lab use only FSC: _____ SCR #: <u>11340299</u>			
Sample Identification	Date Collected	Time Collected	Grab 3	Composite	Soil	Water	Other	Total # of Containers	Remarks					Temperature of samples (min. required if requested)	
MW -45 -10	6/30/00	0945	✓			✓		5	✓	✓					
MW -45 -10 MS/MSD		0945	✓			✓		5	✓	✓					
MW -25 -10			✓			✓		5	✓	✓					
MW -135 -10		1005	✓			✓		2	✓	✓					
MW -255 -10		1040	✓			✓		5	✓	✓					
MW -255 -10 Dup		1040	✓			✓		5	✓	✓					
MW -55 -10	6/29/00	1645	✓			✓		3	✓						
MW -35 -10	6/30/00	1130	✓			✓		3	✓						
MW -265 -10	✓	1145	✓			✓		3	✓						
TRIP BLANK			✓			✓		2	✓						

7 Turnaround Time Requested (TAT) (please circle): Normal Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>STD TAT</u> Rush results requested by (please circle): Phone Fax Phone # <u>(847) 918-4000</u> Fax # <u>(847) 918-4055</u>		Relinquished by: <u>M. Hafford</u> Date: <u>6/29/00</u> Time: <u>10:50</u>		Received by: _____ Date: _____ Time: _____	
Relinquished by: _____ Date: _____ Time: _____		Relinquished by: _____ Date: _____ Time: _____		Received by: <u>FED EX</u> Date: <u>6/30/00</u> Time: <u>1700</u>	
8 Data Package Options (please circle if requested) QC Summary Type VI (Raw Data) <u>Aspe' Rndc</u> Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP)		SDG Complete? Yes No		Relinquished by: _____ Date: _____ Time: _____	
Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.)		Internal Chain of Custody required? Yes No		Relinquished by: _____ Date: _____ Time: _____	

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 7802 Sample # 340367-79

Please print. Instructions on reverse side correspond with circled numbers.

Client: <u>KEFF - McGee</u> Acct. #: _____ Project Name#: <u>Moss American</u> PWSID #: _____ Project Manager: <u>Tom Grazan</u> P.O.# _____ Sampler: <u>Joe Klomp / Weston</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>		Matrix 4	Total # of Containers	Analyses Requested 5 <u>PAH 5 B310</u>	For lab use only FSC: _____ SCR #: <u>1137368</u>							
Sample Identification	Date Collected	Time Collected	3 Grab	Composite	Soil	<input type="checkbox"/> Potable (check if applicable) <input type="checkbox"/> NPDES	Water	Other	Total # of Containers		Remarks	Temperature of samples upon receipt (if requested)
MW-55-10	6/30/00		✓				✓		2	✓		
MW-35-10	↓		✓				✓		2	✓		
MW-265-10	↓		✓				✓		2	✓		
MW-135-10	↓		✓				✓		2	✓		
FB-03	↓		✓				✓		2	✓		
FB-04 ²²												

7 Turnaround Time Requested (TAT) (please circle): Normal Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>STD TAT</u> Rush results requested by (please circle): Phone Fax Phone # <u>(617) 918-4000</u> Fax #: <u>(617) 918-4055</u>	Relinquished by: <u>H. Baker</u> Date <u>3/22/00</u> Time <u>10:00</u> Relinquished by: <u>A. Allen</u> Date <u>4/2/00</u> Time <u>1700</u> Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____	Received by: _____ Date _____ Time _____ Received by: <u>FEDEX</u> Date <u>4/2/00</u> Time <u>1700</u> Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____	Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____
8 Data Package Options (please circle if requested) QC Summary Type VI (Raw Data) <u>As Per Quote</u> SDG Complete? Yes No Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP) Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.) Internal Chain of Custody required? Yes No			

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 7802 Sample # 3410367-79

2

Please print. Instructions on reverse side correspond with circled numbers.

<p>1 Client: <u>Kerr - McGee</u> Acct. #: _____ Project Name/ #: <u>Moss American</u> PWSID #: _____ Project Manager: <u>Tom Gradan</u> P.O.# _____ Sampler: <u>Joe Klemm / WESTON</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u></p>				<p>Matrix 4</p> <p><input type="checkbox"/> Potable (Check if applicable) <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other</p>		<p>5 Analyses Requested</p> <p style="font-size: 2em; transform: rotate(-45deg); opacity: 0.5;">PAH'S 8310</p>				<p>For lab use only FSC: _____ SCR #: <u>1140910</u></p>				
Sample Identification	Date Collected	Time Collected	Grab 3	Composite	Soil	Water	Other	Total # of Containers	Remarks				Temperature of samples upon receipt (if requested)	
<u>FB-04</u>	<u>6/30/00</u>	<u>1625</u>	<u>✓</u>			<u>✓</u>		<u>2</u>	<u>✓</u>					
<u>FB-05</u>	<u>↓</u>	<u>1650</u>	<u>✓</u>			<u>✓</u>		<u>2</u>	<u>✓</u>					
<u>MW-205-10</u>	<u>↓</u>							<u>2</u>	<u>✓</u>					

<p>7 Turnaround Time Requested (TAT) (please circle): Normal Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax Phone #: _____ Fax #: _____</p>		<p>Relinquished by: <u>A. Dente</u> Date <u>6/27/00</u> Time <u>1630</u></p>		<p>Received by: _____ Date _____ Time _____</p>			
<p>8 Data Package Options (please circle if requested)</p> <p>QC Summary Type VI (Raw Data) Yes No Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP)</p>		<p>SDG Complete? Yes No</p> <p>Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.)</p> <p>Internal Chain of Custody required? Yes No</p>		<p>Relinquished by: _____ Date _____ Time _____</p>		<p>Received by: <u>FedEx</u> Date <u>6/30/00</u> Time <u>1700</u></p>	
		<p>Relinquished by: _____ Date _____ Time _____</p>		<p>Received by: _____ Date _____ Time _____</p>			
		<p>Relinquished by: _____ Date _____ Time _____</p>		<p>Received by: <u>Dennis Miller</u> Date <u>7/10/00</u> Time <u>0900</u></p>			

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 7802 Sample # 3410367-79

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Kerr-McGee</u> Acct. #: _____ Project Name/ #: <u>Moss American</u> PWSID #: _____ Project Manager: <u>Tom Grazzi</u> P.O.# _____ Sampler: <u>Joe Klemp / Weston</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>				Matrix 4 <input type="checkbox"/> Potable (Check if applicable) <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other			5 Analyses Requested <div style="text-align: center; border: 1px solid black; padding: 5px;">BTEX's</div>										For lab use only FSC: _____ SCR #: _____			
2 Sample Identification		Date Collected	Time Collected	3 Grab	3 Composite	Soil	Water	Other	Total # of Containers	Remarks										Temperature of samples upon receipt (if requested)
FB-03		6/27/00	1650	✓			✓		3	✓										
FB-04		6/30/00	1625	✓			✓		3	✓										
FB-05		↓	1650	✓			✓		3	✓										
AW-205-10		6/30/00																		

7 **Turnaround Time Requested (TAT)** (please circle): Normal Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: STD TAT
 Rush results requested by (please circle): Phone Fax
 Phone #: (847) 918-4000 Fax #: (847) 918-4055

Relinquished by: <u>[Signature]</u>	Date: <u>6/30/00</u>	Time: <u>1700</u>	Received by: <u>FEDEX</u>	Date: <u>6/30/00</u>	Time: <u>1700</u>
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____

8 **Data Package Options** (please circle if requested)

QC Summary	Type VI (Raw Data) <u>As Per Quote</u>	SDG Complete? <u>Yes</u> No
Type I (Tier I)	GLP	
Type II (Tier II)	Other	Site-specific QC required? Yes No
Type III (NJ Red. Del.)		(If yes, indicate QC sample and submit triplicate volume.)
Typ <input type="checkbox"/> CLP <input type="checkbox"/>		Internal Chain of Custody required? Yes No

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 7802 Sample # 3408127-32

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Kerr - McGee</u> Acct. #: _____ Project Name/#: <u>Mass American</u> PWSID #: _____ Project Manager: <u>Tom Grahn</u> P.O.# _____ Sampler: <u>Becky Kusek/Weston</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>				Matrix 4 <input type="checkbox"/> Potable (Check if applicable) <input type="checkbox"/> NPDES <input type="checkbox"/> Other		5 Analyses Requested <div style="text-align: center; font-size: 2em; opacity: 0.5;">PATHS</div>						For lab use only FSC: _____ SCR #: <u>11351747</u>						
2 Sample Identification			Date Collected	Time Collected	3 Grab	3 Composite	Soil	Water	Other	Total # of Containers	Remarks						Temperature of samples upon receipt (if requested)	
MA3-MW75-280600-01			6/28/00	15:40	X			X		2	X							
MA3-MW325-280600-02			6/28/00	14:50	X			X		2	X							
MA3-MW335-280600-03			6/28/00	14:40	X			X		2	X							
MA3-MW375-280600-04			6/28/00	11:30	X			X		2	X							
MA3-MW355-280600-05			6/28/00	15:45	X			X		2	X							
MA3-MW345-280600-06			6/28/00	14:30	X			X		2	X							

7 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>STD TAT</u> Rush results requested by (please circle): Phone Fax Phone #: <u>(847) 918-4000</u> Fax #: <u>(847) 918-4055</u>				Relinquished by:		Date	Time	Received by:	Date	Time
				<u>M Hufford</u>		<u>6-3-00</u>	<u>14:30</u>	<u>B. Kusek</u>	<u>6/28/00</u>	<u>16:00</u>
				<u>B. Kusek</u>		<u>6/28/00</u>	<u>16:45</u>	<u>FEDEX</u>		
				Relinquished by:		Date	Time	Received by:	Date	Time
				Relinquished by:		Date	Time	Received by:	Date	Time
				Relinquished by:		Date	Time	Received by:	Date	Time

8 Data Package Options (please circle if requested) QC Summary Type VI (Raw Data) <u>As per Quote</u> Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP)		SDG Complete? Yes <u>No</u> Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.) Internal Chain of Custody required? Yes No
--	--	--