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4 May 1999

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, 1<sup>st</sup> Quarter 1999  
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 first quarter 1999 groundwater monitoring event completed at the above referenced project in March 1999. 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 first quarter 1999 reflect conditions at the site after the free-product recovery system was off for approximately five months.

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.

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,





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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 first quarter 1999 groundwater monitoring event at the Moss-American site was completed between 22 March and 25 March 1999. Tasks completed during the field effort for this event included the collection of groundwater elevation data from all the shallow monitoring wells five of the six intermediate wells followed by the collection of groundwater samples from 16 of the 17 shallow monitoring wells and the five intermediate wells. Groundwater sample was not collected from well MW-8S because this well had approximately 3.5 feet of free-product. Therefore, as with any well observed to contain free-product, MW-8S is assumed as contaminated. Groundwater samples were not collected from well MW-20I because of frozen water column on the day of the scheduled sampling. The results of the groundwater samples that were collected and analyzed from the shallow and intermediate 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 22 March 1999, 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 steep at approximately 0.023 feet per foot (ft/ft). The gradient flattens near the river, as does the ground surface, with an average of approximately 0.011 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



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approximately 0.092 ft/day. Near the river, the velocity of groundwater flow is calculated to be approximately 0.042 ft/day.

## 2.2 GROUNDWATER SAMPLE ANALYSES RESULTS

Groundwater samples were collected from sixteen shallow monitoring wells (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, TW-05, and TW-09) and five intermediate monitoring wells (MW-3I, MW-4I, MW-7I, MW-8I, MW-9I) screened within the shallow and intermediate groundwater-bearing zones, respectively. In addition, for quality assurance/quality control (QA/QC) purposes, three sample duplicates (identified by a FD prefix), one matrix spike/matrix spike duplicate (MS/MSD), and three 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 6.78 to 8.35 standard pH units (S.U.) in the shallow groundwater samples and 8.68 to 9.2 S.U in intermediate wells. The specific conductivity ranged from 0.006 to 0.79 mΩ/cm in the shallow groundwater samples and 0.006 to 0.90 mΩ/cm in the intermediate monitoring wells. Groundwater temperatures ranged from 4.0 to 8.2° C in the shallow groundwater and 8.6 to 10.2° C in the intermediate monitoring wells. The redox potentials of the groundwater ranged from -378 to 250 millivolts (mV) in shallow groundwater samples and 95 to 180 mV in the intermediate monitoring wells. Dissolved oxygen levels ranged from 1.4 to 5.6 mg/L in the shallow monitoring wells. Turbidity ranged from 90 to 1,448 nephelometric turbidity units (NTU) in the shallow groundwater samples and 97.9 to 1,251 NTU in the intermediate monitoring wells.

### 2.2.2 Laboratory Analyses

Each groundwater sample collected during the first quarter 1999 monitoring period was analyzed for BTEX and PAH compounds. The results of these analyses are presented in Table 3. Table 3



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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. 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, and benzo(a)pyrene were detected at concentrations that exceed their respective PALs and/or ES in the groundwater samples collected from shallow wells. They 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 and MW-7S.
- Naphthalene was detected at concentrations exceeding the WDNR PAL of 8 µg/L in groundwater samples collected from monitoring wells MW-4S, MW-7S, TW-05 and TW-09.
- Fluorene was detected at concentrations exceeding WDNR PAL of 80 µg/L in groundwater sample collected from MW-4S and TW-09.
- Benzo(a)pyrene was detected at concentrations exceeding the WDNR PAL of 0.02 µg/L in groundwater samples collected from monitoring wells MW-3S, MW-4S, MW-4I, MW-7S, MW-9S, MW-9I, MW-28S, TW-05 and TW-09.

#### ES Exceedances:

- Benzene was detected at concentrations exceeding the WDNR PAL of 5 µg/L in groundwater sample MW-7S.
- Naphthalene was detected at concentrations exceeding the WDNR ES of 40 µg/L in groundwater samples collected from monitoring wells MW-4S, MW-7S, and TW-09.
- Fluorene was detected at concentrations exceeding the WDNR ES of 400 µg/L in groundwater sample collected from monitoring well TW-09.



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- Benzo(a)pyrene was detected at concentrations exceeding the WDNR ES of 0.2  $\mu\text{g/L}$  in groundwater samples collected from monitoring wells MW-4S, MW-7S, MW-28S, TW-05 and TW-09.

For the most part, the detected plume boundary is an area encompassing the five impacted wells (MW-4S, MW-7S, MW-8S, TW-05, and TW-09). Groundwater from monitoring wells MW-28S, MW-3S, and MW-9S, and MW-9I indicated a concentration of benzo(a)pyrene above the WDNR PAL of 0.02  $\mu\text{g/L}$ , which may be related to the seasonal high groundwater table. Based on these detected concentrations, the width of the contaminant plume covers a broader area, with a more easterly trend as indicated in Figure 1. This trend of the plume may also be attributed to the free product recovery system turned off for approximately five months.

A summary of the concentration of contaminants at wells that have regularly exceeded PALs and/or ES during the four quarters of 1998 and the first quarter of 1999 are presented in Table 4. Levels of naphthalene, fluorene, and benzo(a)pyrene fluctuate over wide ranges in these wells without a common pattern. A more accurate trend may be illustrated as additional data becomes available for these wells during the later part of 1999.

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.

A handwritten signature in cursive script that reads "Thomas P. Graan".

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

TPG/slr  
Attachments

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

Table 1

**Groundwater Elevation Measurements  
First Quarter 1999  
Moss-American Site  
Milwaukee, Wisconsin**

Well ID	Ground Elevation	TOC Elevation	Depth to Water	GW Elevation	Product Thickness
MW-3S	729.00	731.50	6.87	724.63	ND
MW-4S	731.00	732.86	4.81	728.05	ND
MW-5S	723.00	724.70	4.79	719.91	ND
MW-6S	727.00	724.28	3.87	720.41	ND
MW-7S	720.00	721.70	5.50	716.20	ND
MW-8S	718.00	721.73	5.40	716.33	3.50
MW-9S	720.00	721.71	5.63	716.08	ND
MW-10S	723.00	726.58	5.20	721.38	ND
MW-13S	737.00	738.68	2.30	736.38	ND
MW-20S	716.00	719.94	4.24	715.70	ND
MW-25S	736.83	739.24	2.88	736.36	ND
MW-26S	732.31	731.66	3.18	728.48	ND
MW-27S	720.59	723.15	3.38	719.77	ND
MW-28S	720.04	722.65	3.00	719.65	ND
MW-29S	720.01	722.39	4.11	718.28	ND
TW-05	721.76	724.16	2.79	721.37	ND
TVW-09	717.61	719.96	3.39	716.57	trace

Note: All values in feet

TOC = Top of the casing

GW = Groundwater

ND = Not detected

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

**Table 2**

**Field-Measured Parameters  
First Quarter 1999  
Moss-American Site  
Kerr-McGee Corporation**

<b>Well Number</b>	<b>pH (Standard Units)</b>	<b>Specific Conductance (mΩ/cm)</b>	<b>Temperature (°C)</b>	<b>Redox Potential (mV)</b>	<b>Dissolved Oxygen (mg/L)</b>	<b>Turbidity (NTU)</b>
MW-3S	7.79	0.006	7.8	143	3.4	1,448
MW-4S	8.13	0.51	7.0	55	3.6	90
MW-5S	7.76	0.66	7.9	37	3.6	596
MW-6S	8.35	0.27	7.9	194	2.9	1,151
MW-7S	7.24	0.56	8.2	-32	2.4	558
MW-8S	NM	NM	NM	NM	NM	NM
MW-9S	7.59	0.01	8.0	-93	1.9	1151
MW-10S	6.78	0.36	4.0	-378	4.5	176
MW-13S	7.68	0.19	5.2	250	4.6	553
MW-20S	7.86	0.79	5.7	138	4.5	458
MW-25S	8.24	0.005	5.0	185	3.8	1,274
MW-26S	7.77	0.011	6.6	172	3.8	1,048
MW-27S	7.43	0.48	6.9	-48	1.5	659
MW-28S	7.83	0.008	7.6	133	5.6	1,197
MW-29S	7.54	0.47	7.3	221	3.6	1,181
TW-05	7.48	0.44	5.8	-65	1.4	392
TW-09	NM	NM	NM	NM	NM	NM
MW-3I	9.20	0.006	10.2	123	NM	431
MW-4I	8.78	0.90	10.0	95	NM	97.9
MW-7I	8.85	0.21	8.7	138	NM	146
MW-8I	9.0	0.23	8.6	180	NM	262
MW-9I	8.68	0.018	10.2	150	NM	1251

S - Shallow well  
 TW - Temporary Well (Shallow)  
 I - Intermediate Well  
 NM - Not measured.

**Table 3**  
**Groundwater Sample Analytical Results**  
**First Quarter 1999**  
**Moss-American Site**  
**Milwaukee, Wisconsin**

Sample ID:	MW-3S-05	MW-3I-05	MW-4S-05	MW-4I-05	MW-5S-05	MW-6S-05	WDNR PAL ug/L	WDNR ES ug/L						
Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater								
Sample Date:	3/24/99	3/24/99	3/24/99	3/24/99	3/25/99	3/23/99								
Units of Measure:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L								
<b>Parameters</b>														
<b>VOCs</b>														
Benzene	0.2	U	0.2	U	5		0.2	U	0.2	U	0.2	U	0.5	5
Toluene	0.2	U	0.2	U	12		0.2	U	0.2	U	0.2	U	68.6	343
Ethylbenzene	0.2	U	0.2	U	14		0.2	U	0.2	U	0.2	U	140	700
Total Xylenes	0.6	U	0.6	U	32		0.6	U	0.6	U	0.6	U	124	620
<b>PAHs</b>														
Naphthalene	0.77	U	0.81	U	1330		0.78	U	0.80	U	0.77	U	8.0	40
Acenaphthylene	0.77	U	0.81	U	17	U	0.78	U	0.80	U	0.77	U	NA	NA
Acenaphthene	0.77	U	0.81	U	610		0.78	U	0.80	U	0.77	U	NA	NA
Fluorene	0.16	U	0.17	U	271		0.17	U	0.17	U	0.16	U	80	400
Phenanthrene	0.044	U	0.047	U	5.8	J	0.159	J	0.046	U	0.044	U	NA	NA
Anthracene	0.030	U	0.032	U	27.8		0.030	U	0.031	U	0.030	U	NA	NA
Fluoranthene	0.083	J	0.02	U	116		0.155	J	0.020	U	0.019	U	NA	NA
Pyrene	0.17	U	0.18	U	106		0.18	U	0.18	U	0.17	U	NA	NA
Benzo(a)anthracene	0.028	J	0.018	U	16		0.053	J	0.018	U	0.017	U	NA	NA
Chrysene	0.063	J	0.06	U	14.4		0.089	J	0.059	U	0.057	U	NA	NA
Benzo(b)fluoranthene	0.069	U	0.036	U	5.9		0.034	U	0.035	U	0.034	U	NA	NA
Benzo(k)fluoranthene	0.026	U	0.027	U	3.1		0.026	U	0.027	U	0.026	U	NA	NA
Benzo(a)pyrene	0.067	J	0.022	U	6.1		0.035	J	0.022	U	0.021	U	0.02	0.2
Dibenzo(a,h)anthracene	0.045	U	0.048	U	1	U	0.046	U	0.047	U	0.045	U	NA	NA
Benzo(g,h,i)perylene	0.096	U	0.10	U	2.1	U	0.096	U	0.099	U	0.095	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.062	U	0.065	U	3.6	J	0.062	U	0.064	U	0.062	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.



**Table 3 (Cont.)**  
**Groundwater Sample Analytical Results**  
**First Quarter 1999**  
**Moss-American Site**  
**Milwaukee, Wisconsin**

Sample ID:	MW-7S-05	MW-7I-05	MW-8I-05	MW-9S-05	MW-9I-05	MW-10S-05	WDNR PAL ug/L	WDNR ES ug/L						
Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater								
Sample Date:	3/23/99	3/24/99	3/25/99	3/23/99	3/23/99	3/23/99								
Units of Measure:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L								
<b>Parameters</b>														
<b>VOCs</b>														
Benzene	9	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.5	5	
Toluene	1	0.2	U	0.2	U	0.2	U	0.2	U	4		68.6	343	
Ethylbenzene	29	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	140	700	
Total Xylenes	92	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	124	620	
<b>PAHs</b>														
Naphthalene	5560	0.79	U	0.83	U	0.79	U	0.77	U	0.76	U	8.0	40	
Acenaphthylene	230	0.79	U	0.83	U	0.79	U	0.77	U	0.76	U	NA	NA	
Acenaphthene	170	0.79	U	0.83	U	0.79	U	0.77	U	0.76	U	NA	NA	
Fluorene	30	0.17	U	0.18	U	0.17	U	0.16	U	0.16	U	80	400	
Phenanthrene	0.9	U	0.046	U	0.054	J	0.046	U	0.044	U	0.044	U	NA	NA
Anthracene	0.61	U	0.031	U	0.032	U	0.031	U	0.030	U	0.030	U	NA	NA
Fluoranthene	0.39	J	0.02	U	0.069	J	0.02	U	0.038	U	0.019	U	NA	NA
Pyrene	3.5	U	0.18	U	0.19	U	0.18	U	0.17	U	0.17	U	NA	NA
Benzo(a)anthracene	0.35	U	0.018	U	0.026	J	0.018	U	0.017	U	0.017	U	NA	NA
Chrysene	1.2	U	0.058	U	0.061	U	0.058	U	0.057	U	0.056	U	NA	NA
Benzo(b)fluoranthene	0.69	U	0.035	U	0.036	U	0.035	U	0.042	J	0.033	U	NA	NA
Benzo(k)fluoranthene	0.53	U	0.027	U	0.028	U	0.027	U	0.026	U	0.026	U	NA	NA
Benzo(a)pyrene	0.43	U	0.022	U	0.023	U	0.037	J	0.042	U	0.021	U	0.02	0.2
Dibenzo(a,h)anthracene	0.92	U	0.047	U	0.049	U	0.046	U	0.045	U	0.045	U	NA	NA
Benzo(g,h,i)perylene	1.9	U	0.098	U	0.10	U	0.098	U	0.095	U	0.094	U	NA	NA
Indeno(1,2,3-cd)pyrene	1.3	U	0.063	U	0.066	U	0.063	U	0.062	U	0.061	U	NA	NA

VOC - Volatile Organic Compound.

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ES = Enforcement Standard (WDNR)

PAH - Polynuclear Aromatic Hydrocarbon.

NA - PAL or ES not available for this parameter.

**Table 3 (Cont.)**  
**Groundwater Sample Analytical Results**  
**First Quarter 1999**  
**Moss-American Site**  
**Milwaukee, Wisconsin**

Sample ID:	MW-13S-05		MW-20S-05		MW-25S-05		MW-26S-05		MW-27S-05		MW-28S-05		WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater		Groundwater		Groundwater		Groundwater		Groundwater		Groundwater			
Sample Date:	3/24/99		3/25/99		3/24/99		3/24/99		3/23/99		3/24/99			
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	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	0.2	U	140	700
Total Xylenes	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	124	620
PAHs														
Naphthalene	0.78	U	0.79	U	0.76	U	0.80	U	0.76	U	0.77	U	8.0	40
Acenaphthylene	0.78	U	0.79	U	0.76	U	0.80	U	0.76	U	0.77	U	NA	NA
Acenaphthene	0.78	U	0.79	U	0.76	U	0.80	U	0.76	U	0.77	U	NA	NA
Fluorene	0.17	U	0.17	U	0.16	U	0.17	U	0.16	U	0.16	U	80	400
Phenanthrene	0.045	U	0.046	U	0.044	U	0.046	U	0.044	U	0.33	U	NA	NA
Anthracene	0.030	U	0.031	U	0.030	U	0.031	U	0.030	U	0.167	U	NA	NA
Fluoranthene	0.047	J	0.02	U	0.019	U	0.021	J	0.019	U	1.52	JU	NA	NA
Pyrene	0.17	U	0.18	U	0.17	U	0.18	U	0.17	U	1.79	U	NA	NA
Benzo(a)anthracene	0.02	J	0.018	U	0.017	U	0.018	U	0.017	U	0.556	U	NA	NA
Chrysene	0.057	U	0.059	U	0.056	U	0.059	U	0.056	U	1.43	U	NA	NA
Benzo(b)fluoranthene	0.034	U	0.035	U	0.033	U	0.035	U	0.033	U	2.32	U	NA	NA
Benzo(k)fluoranthene	0.026	U	0.027	U	0.026	U	0.027	U	0.026	U	0.813	U	NA	NA
Benzo(a)pyrene	0.025	J	0.022	U	0.021	U	0.022	U	0.021	U	1.94	U	0.02	0.2
Dibenzo(a,h)anthracene	0.046	U	0.047	U	0.045	U	0.047	U	0.045	U	0.24	U	NA	NA
Benzo(g,h,i)perylene	0.096	U	0.098	U	0.095	U	0.098	U	0.095	U	2.31	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.062	U	0.064	U	0.061	U	0.064	U	0.061	U	2.38	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.

Table 3 (Cont.)

**Groundwater Sample Analytical Results**  
**First Quarter 1999**  
**Moss-American Site**  
**Milwaukee, Wisconsin**

Sample ID:	MW-29S-05	TW-05-05	TW-09-05	FD-01-05	FD-02-05	FD-03-05	WDNR PAL ug/L	WDNR ES ug/L						
Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater								
Sample Date:	3/23/99	3/23/99	3/23/99	3/23/99	3/24/99	3/25/99								
Units of Measure:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L								
<b>Parameters</b>														
<b>VOCs</b>														
Benzene	0.2	U	0.2	U	0.3	J	0.2	U	0.2	U	0.2	U	0.5	5
Toluene	0.2	U	0.2	U	2		0.2	U	0.2	U	0.2	U	68.6	343
Ethylbenzene	0.2	U	0.2	U	10		0.2	U	0.2	U	0.2	U	140	700
Total Xylenes	0.6	U	0.6	U	26		0.6	U	0.6	U	0.6	U	124	620
<b>PAHs</b>														
Naphthalene	0.82	U	19.9	J	9,500	J	0.78	U	0.77	U	0.81	U	8.0	40
Acenaphthylene	0.82	U	14.6	J	1,600	U	0.78	U	0.77	U	0.81	U	NA	NA
Acenaphthene	0.82	U	110		5,200	J	0.78	U	0.77	U	0.81	U	NA	NA
Fluorene	0.17	U	65.4		4,300		0.17	U	0.16	U	0.17	U	80	400
Phenanthrene	0.047	U	2.1		11,100		0.045	U	0.044	U	0.047	U	NA	NA
Anthracene	0.032	U	4.5		1,180		0.030	U	0.030	U	0.031	U	NA	NA
Fluoranthene	0.05	U	27.5		4,730		0.02	U	0.034	J	0.02	U	NA	NA
Pyrene	0.18	U	26.8		4,800		0.18	U	0.17	U	0.18	U	NA	NA
Benzo(a)anthracene	0.018	U	4.49		730		0.018	U	0.017	U	0.018	U	NA	NA
Chrysene	0.06	U	5.1		810		0.058	U	0.057	U	0.06	U	NA	NA
Benzo(b)fluoranthene	0.036	U	2.02		240		0.034	U	0.034	U	0.035	U	NA	NA
Benzo(k)fluoranthene	0.028	U	1.06		130		0.026	U	0.026	U	0.027	U	NA	NA
Benzo(a)pyrene	0.023	U	2.1		240		0.021	U	0.021	U	0.022	U	0.02	0.2
Dibenzo(a,h)anthracene	0.048	U	0.35	J	93	U	0.046	U	0.045	U	0.048	U	NA	NA
Benzo(g,h,i)perylene	0.10	U	0.54	J	200	U	0.097	U	0.095	U	0.10	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.066	U	1.09	J	140	J	0.062	U	0.061	U	0.065	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.

FD-01 is field duplicate of MW-27S, FD-02 is a field duplicate of MW-13S, and FD-03 is a field duplicate of MW-5S

**Table 3 (Cont.)  
Groundwater Sample Analytical Results  
First Quarter 1999  
Moss-American Site  
Milwaukee, Wisconsin**

Sample ID:	FB-01-05		FB-02-05		FB-03-05		WDNR PAL ug/L	WDNR ES ug/L
Sample Matrix:	Groundwater		Groundwater		Groundwater			
Sample Date:	3/23/99		3/24/99		3/25/99			
Units of Measure:	ug/L		ug/L		ug/L			
<b>Parameters</b>								
<b>VOCs</b>								
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
<b>PAHs</b>								
Naphthalene	0.77	U	0.76	U	0.78	U	8.0	40
Acenaphthylene	0.77	U	0.76	U	0.78	U	NA	NA
Acenaphthene	0.77	U	0.76	U	0.78	U	NA	NA
Fluorene	0.16	U	0.16	U	0.17	U	80	400
Phenanthrene	0.049	J	0.043	U	0.045	U	NA	NA
Anthracene	0.030	U	0.029	U	0.030	U	NA	NA
Fluoranthene	0.036	J	0.019	U	0.02	U	NA	NA
Pyrene	0.17	U	0.17	U	0.18	U	NA	NA
Benzo(a)anthracene	0.017	U	0.017	U	0.018	U	NA	NA
Chrysene	0.057	U	0.056	U	0.058	U	NA	NA
Benzo(b)fluoranthene	0.034	U	0.033	U	0.034	U	NA	NA
Benzo(k)fluoranthene	0.026	U	0.026	U	0.026	U	NA	NA
Benzo(a)pyrene	0.023	J	0.021	U	0.022	U	0.02	0.2
Dibenzo(a,h)anthracene	0.045	U	0.044	U	0.046	U	NA	NA
Benzo(g,h,i)perylene	0.096	J	0.094	U	0.097	U	NA	NA
Indeno(1,2,3-cd)pyrene	0.062	U	0.060	U	0.063	U	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

Table 4

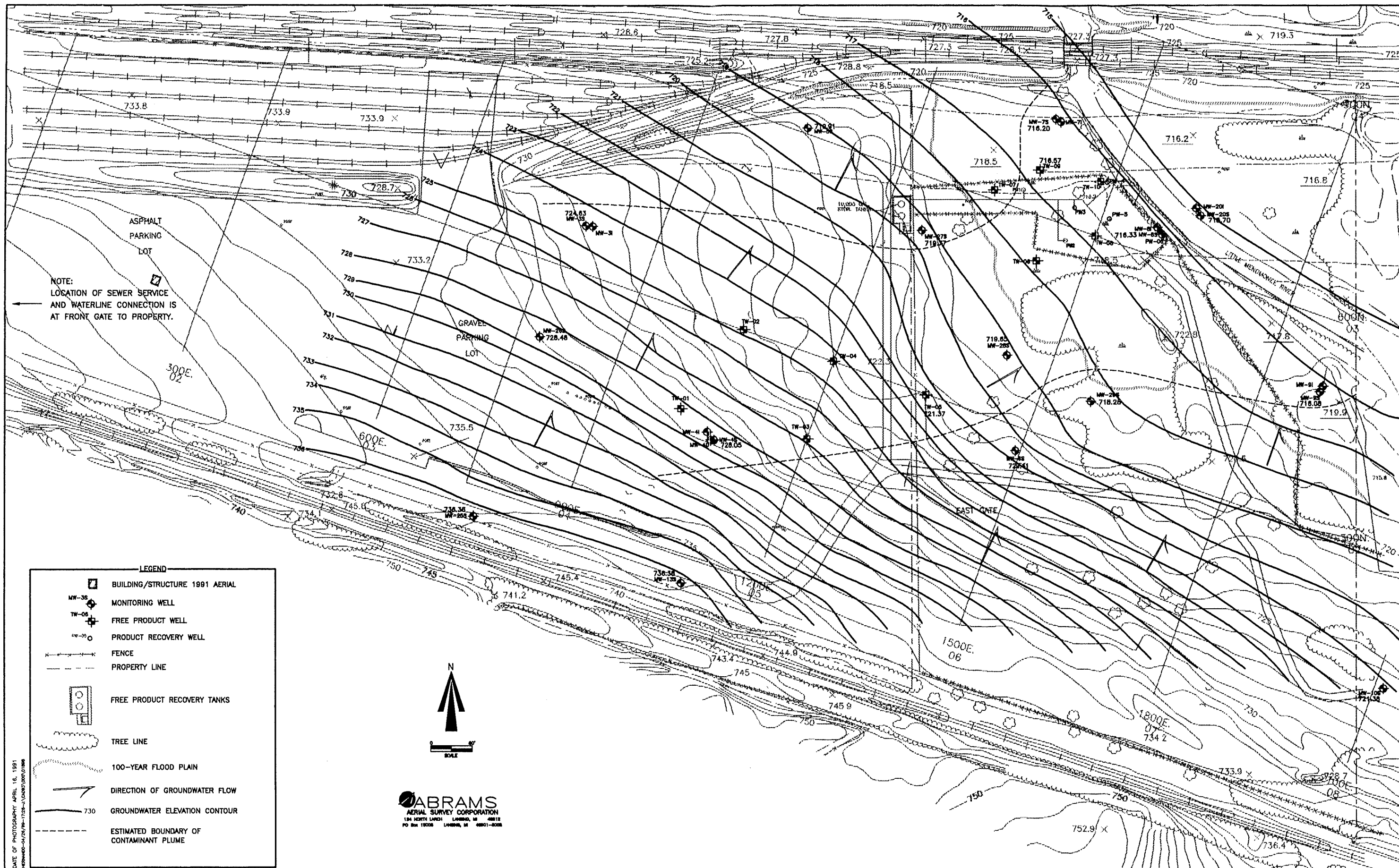
**Concentration Trends in Groundwater Samples  
Four quarters of 1998 and 1Q 1999  
Moss-American Site  
Milwaukee, Wisconsin**

	MW-4S	MW-7S	TW-05	TW-09
<b><u>Benzene</u></b>				
First Quarter (March '98)	10	5	0.2 U	2 J
Second Quarter (June '98)	8	5	0.2 U	0.5 J
Third Quarter (September '98)	3	8 J	0.2 U	2 U
Fourth Quarter (December '98)	3 J	NS	0.2 U	2 U
First Quarter (March '99)	5	9	0.2 U	0.3 U
<b><u>Naphthalene</u></b>				
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
<b><u>Fluorene</u></b>				
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
<b><u>Benzo(a) pyrene</u></b>				
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

NS = Not Sampled

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

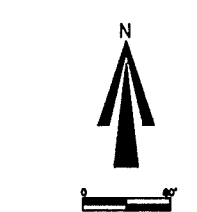
J = Estimated Concentration



DATE OF PHOTOGRAPHY: APRIL 16, 1991  
 DRAWING NO. 026700030002

**LEGEND**

- BUILDING/STRUCTURE 1991 AERIAL
- MW-35 MONITORING WELL
- FW-06 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
- 730 GROUNDWATER ELEVATION CONTOUR
- ESTIMATED BOUNDARY OF CONTAMINANT PLUME



**ABRAMS**  
 AERIAL SURVEY CORPORATION  
 184 NORTH LARCH LAMONA, WI 53018  
 PO BOX 18008 LAMONA, WI 53011-8008

2/98	100% DESIGN SUBMITAL				
4/99	RECORD DRAWING - PAD CONSTRUCTION, ETC.				
NO.	DATE	APPR.	NO.	DATE	APPR.

**MOSS - AMERICAN SITE**  
 Milwaukee, Wisconsin

**WESTON**

CHECKED	DATE	CLIENT APPROVAL	DATE
DES. ENG.			
PROJ. ENG.			
PROJ. MGR.			
APPROVED			
APPROVED			

**GROUNDWATER ELEVATION CONTOUR MAP**  
 1ST QUARTER 1999

OWNER	D.C.H.	DATE	FEB 99	FIGURE	1	REV. NO.	
SCALE	1" = 60'	DRAWING NO.	026870070030002	SHEET		OF	

**ATTACHMENT A**

**LABORATORY REPORTS**

**Kerr-McGee  
Moss American Site  
Milwaukee, Wisconsin  
SDG# MOS07**

**30 water samples – BTEX  
Method SW846 8021B**

**1. Holding Times:**

<u>Lab ID</u>	<u>Client ID</u>	<u>Sample Date</u>	<u>Analysis Date</u>
3116848	FD02-5	3/24/99	3/27/99
3116849	TB02	3/24/99	3/26/99
3117986	MW05S-5	3/25/99	3/30/99
3117987	MW20S-05	3/25/99	3/30/99
3117988	MW08I-05	3/25/99	3/30/99
3117989	FB03-05	3/25/99	3/30/99
3117990	FD03-05	3/25/99	3/30/99
3117991	TB03	3/25/99	3/31/99
3115833	MW10S-05	3/23/99	3/26/99
3115834	MW09S-05	3/23/99	3/26/99
3115835	MW09I-05	3/23/99	3/26/99
3115836	MW29S-05	3/23/99	3/26/99
3115837	TW05S-05	3/23/99	3/26/99
3115838	MW06S-05	3/23/99	3/26/99
3115839	MW27S-05	3/23/99	3/26/99
3115840	MW07S-05	3/23/99	3/26/99
3115841	TW09-05	3/23/99	3/26/99
3115842	FB01-05	3/23/99	3/26/99
3115843	FD01-05	3/23/99	3/26/99
3115844	TB01-05	3/23/99	3/25/99
3116836	MW07I-05	3/24/99	3/27/99
3116837	MW28S-05	3/24/99	3/26/99
3116840	MW13S-05	3/24/99	3/27/99
3116841	MW25S-05	3/24/99	3/27/99
3116842	MW26S-05	3/24/99	3/27/99
3116843	MW03S-05	3/24/99	3/27/99
3116844	MW03I-05	3/24/99	3/27/99
3116845	MW04S-05	3/24/99	3/27/99
3116846	MW04I-05	3/24/99	3/27/99
3116847	FB02-05	3/24/99	3/27/99

All samples were analyzed within the required holding times.



**Kerr-McGee  
Moss American Site  
Milwaukee, Wisconsin  
SDG# MOS07  
BTEX Cont.**

2. Method Blank:

Six method blanks were associated with the BTEX samples (BLK6505, BLK6506, BLK6507, BLK5194, and BLK5195). All six blanks were free of contamination.

3. Initial and Continuing Calibration:

For the BTEX samples, all initial and continuing calibration criteria appears to have been achieved. No deficiencies were noted in the laboratory narrative.

4. Surrogate Recovery-:

The surrogate recoveries for the BTEX surrogate (TFT) were all within the required QC limits of 77% to 125 %.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Sample MW28S-05 was used for the MS/MSD audit in one batch. Laboratory QC was used for the second batch. All MS and MSD recoveries were acceptable.

6. Laboratory Control Sample:

All laboratory control sample results were acceptable.

7. Trip Blanks:

All trip blank results were non-detect. All results are acceptable.

8. Field Blanks:

FB01-05, FB02-05, and FB03-05 were field blanks. All BTEX results were non-detect. All results are acceptable.

**Kerr-McGee  
Moss American Site  
Milwaukee, Wisconsin  
SDG# MOS07  
BTEX Cont.**

9. Field Duplicates:

Samples MW27S-05 and FD01-05, MW13S-05 and FD02-05, and MW05S-05 and FD03-05 are field duplicates. Overall, results show good correlation. No qualifications are applied based on this criterion.

**Kerr-McGee  
Moss American Site  
Milwaukee, Wisconsin  
SDG# MOS07**

**27 Water Samples – Polynuclear Aromatic Hydrocarbons (PAHs by HPLC)  
Method SW846 3510C/8310**

**1. Holding Times:**

<u>Lab ID</u>	<u>Client ID</u>	<u>Sample Date</u>	<u>Extraction Date</u>	<u>Analysis Date</u>
3116848	FD02-5	3/24/99	3/27/99	3/29/99
3117986	MW05S-5	3/25/99	4/1/99	4/6/99
3117987	MW20S-05	3/25/99	4/1/99	4/6/99
3117988	MW08I-05	3/25/99	4/1/99	4/6/99
3117989	FB03-05	3/25/99	4/1/99	4/6/99
3117990	FD03-05	3/25/99	4/1/99	4/6/99
3115833	MW10S-05	3/23/99	3/26/99	3/29/99
3115834	MW09S-05	3/23/99	3/26/99	3/29/99
3115835	MW09I-05	3/23/99	3/26/99	3/29/99
3115836	MW29S-05	3/23/99	3/26/99	3/29/99
3115837	TW05S-05	3/23/99	3/26/99	3/29/99
3115838	MW06S-05	3/23/99	3/26/99	3/29/99
3115839	MW27S-05	3/23/99	3/26/99	3/29/99
3115840	MW07S-05	3/23/99	3/26/99	3/31/99
3115841	TW09-05	3/23/99	3/26/99	3/30/99
3115842	FB01-05	3/23/99	3/26/99	3/29/99
3115843	FD01-05	3/23/99	3/26/99	3/30/99
3116836	MW07I-05	3/24/99	3/27/99	3/29/99
3116837	MW28S-05	3/24/99	3/27/99	3/31/99
3116840	MW13S-05	3/24/99	3/27/99	3/29/99
3116841	MW25S-05	3/24/99	3/27/99	3/29/99
3116842	MW26S-05	3/24/99	3/27/99	3/29/99
3116843	MW03S-05	3/24/99	3/27/99	3/29/99
3116844	MW03I-05	3/24/99	3/27/99	3/29/99
3116845	MW04S-05	3/24/99	3/27/99	3/30/99
3116846	MW04I-05	3/24/99	3/27/99	3/29/99
311847	FB02-05	3/24/99	3/27/99	3/29/99

All samples were extracted and analyzed within the required holding times.

**2. Method Blank:**

There are multiple water method blanks associated with the PAH fraction (PBLKD1, PBLKCG and PBLKGG). All method blanks were free of contamination.

**Kerr-McGee  
Moss American Site  
Milwaukee, Wisconsin  
SDG# MOS07  
PAHs Cont.**

3. Initial and Continuing Calibration:

For the PAH samples, all initial and continuing calibration criteria was achieved.

4. Surrogate Recovery:

The surrogates for PAHs include nitrobenzene and triphenylene. All nitrobenzene results on the primary column were acceptable. All nitrobenzene results on the secondary column indicated a reduced sensitivity (zero percent recovery or diluted out). The laboratory narrative states that the nitrobenzene surrogate is not visible on the fluorescence or confirmation detector. Triphenylene results were acceptable except for the confirmation results for sample MW28S and MW07S-05, and both results for TW05S-05, TW09-05, MW04S-05, and MW13S-05.

5. Matrix Spike/Matrix Spike Duplicate:

Sample MW28S-05 was used for the MS/MSD audit. The following MS/MSD results were outside QC limits: benzo(b)fluoranthene (62/39), benzo(k)fluoranthene (39/47), and benzo(a)pyrene (4/13). The lab assumes these results to be attributed to interference from the background matrix. The corresponding LCS results are all acceptable. No qualifications are required.

6. Laboratory Control Sample:

All laboratory control results (LCS83, LCS71, and LCSBF) are acceptable.

7. Field Blanks:

FB01-05, FB02-05, and FB03-05 were field blanks. The following compounds were detected in FB01-05: phenanthrene (0.049), fluoranthene (0.036), and benzo(a)pyrene (0.023). Sample results less than 5 times the amount found in the blank are qualified as non-detect, U in samples MW10S-05, MW09S-05, MW09I-05, MW29S-05, TW05-05, MW6S-05, MW27S-05, MW07S-05, TW09-05, and FD01-05. All FB02-05 and FB03-05 results were non-detect.

**Kerr-McGee  
Moss American Site  
Milwaukee, Wisconsin  
SDG# MOS07  
PAHs Cont.**

8. Field Duplicates:

Samples MW27S-05 and FD01-05, MW13S-05 and FD02-05, and MW05S-05 and FD03-05 are field duplicates. All sample results show good field correlation.



LLI Sample No. WW 3116843

Collected: 3/24/99 at 14:35 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-3S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-S-5 SDG#: MOS07-18

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		LIMIT	UNITS
		RESULTS	METHOD DETECTION		
1861	PAH's in Water				See Page 2
8213	BTEX (8021)				See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:53:30 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/14/97





**LLI Sample No. WW 3116843**

Collected: 3/24/99 at 14:35 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-3S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-S-5 SDG#: MOS07-18

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.77	ug/l
3281	Acenaphthylene	N.D.	0.77	ug/l
3282	Acenaphthene	N.D.	0.77	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	0.083 J	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	0.028 J	0.017	ug/l
3289	Chrysene	0.063 J	0.057	ug/l
3290	Benzo(b)fluoranthene	0.069	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	0.067 J	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.096	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.062	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





**LLI Sample No. WW 3116843**

Collected: 3/24/99 at 14:35 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-3S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-S-5 SDG#: MOS07-18

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



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

See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/4/97







### LLI Sample No. WW 3116843

Collected: 03/24/99 at 14:35 by AS

Submitted: 03/25/99

Account No: 07802  
 Kerr-McGee Corporation  
 P.O. Box 25861  
 Oklahoma City OK 73125

MW-3S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-S-5 SDG#: MOS07-18

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 1550	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 0941	Barry R. Shoemaker



Lancaster Laboratories  
 2425 N.E. Holland Pike  
 P.O. Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax 717-656-2681





**LLI Sample No. 3116843**

MW-3S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene										
	0.77 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene										
	0.77 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene										
	0.77 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene										
	0.16 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene										
	0.044 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene										
	0.030 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene										
	0.019 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene										
	0.17 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene										
	0.017 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene										
	0.057 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene										
	0.034 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene										
	0.026 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene										
	0.021 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene										
	0.045 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene										
	0.096 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.062 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 12488  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2667

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





**LLI Sample No. 3116843**  
MW-3S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz Triphenyle	75 89	22 60	131 120
8213 BTEX (8021)		TFT	97	77	125



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





LLI Sample No. WW 3116844

Collected: 3/24/99 at 15:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-3I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-I-5 SDG#: MOS07-19

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		LIMIT	UNITS
		RESULTS	METHOD DETECTION		
1861	PAH's in Water				See Page 2
8213	BTEX (8021)				See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:54:10 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





**LLI Sample No. WW 3116844**

Collected: 3/24/99 at 15:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-3I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-I-5 SDG#: MOS07-19

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.81	ug/l
3281	Acenaphthylene	N.D.	0.81	ug/l
3282	Acenaphthene	N.D.	0.81	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.047	ug/l
3285	Anthracene	N.D.	0.032	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.060	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.036	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.048	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.065	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2277 East Exchange Blvd  
P.O. Box 148  
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TEL: 717-656-2300 FAX: 717-656-7481





LLI Sample No. WW 3116844

Collected: 3/24/99 at 15:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-3I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-I-5 SDG#: MOS07-19

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



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





**LLI Sample No. WW 3116844**

Collected: 03/24/99 at 15:00 by AS

Submitted: 03/25/99

MW-3I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
3-I-5 SDG#: MOS07-19

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 1633	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 1210	Barry R. Shoemaker



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
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**LLI Sample No. 3116844**

MW-3I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
-----												
1861 PAH's in Water		Batch: 990850008A										
-----												
3280	Naphthalene											
	0.81 ug/l	N.D.		88	93	4	88			37	120	
3281	Acenaphthylene											
	0.81 ug/l	N.D.		90	95	4	89			41	135	
3282	Acenaphthene											
	0.81 ug/l	N.D.		90	95	4	89			38	135	
3283	Fluorene											
	0.17 ug/l	N.D.		93	97	3	93			41	140	
3284	Phenanthrene											
	0.047 ug/l	N.D.		86	90	3	93			48	152	
3285	Anthracene											
	0.032 ug/l	N.D.		82	85	2	89			42	143	
3286	Fluoranthene											
	0.020 ug/l	N.D.		52	61	8	96			48	155	
3287	Pyrene											
	0.18 ug/l	N.D.		96	97	0	103			51	146	
3288	Benzo(a)anthracene											
	0.018 ug/l	N.D.		66	70	3	97			52	146	
3289	Chrysene											
	0.060 ug/l	N.D.		83	81	3	100			56	145	
3290	Benzo(b)fluoranthene											
	0.036 ug/l	N.D.		-63	-40	17	99			59	141	
3291	Benzo(k)fluoranthene											
	0.027 ug/l	N.D.		39	47	7	97			60	137	
3292	Benzo(a)pyrene											
	0.022 ug/l	N.D.		-4	13	13	100			42	158	
3293	Dibenzo(a,h)anthracene											
	0.048 ug/l	N.D.		90	92	1	100			49	142	
3294	Benzo(g,h,i)perylene											
	0.10 ug/l	N.D.		87	91	3	105			46	148	
3295	Indeno(1,2,3-cd)pyrene											
	0.065 ug/l	N.D.		67	74	6	104			64	134	
-----												
8213 BTEX (8021)		Batch: 99085A65										
-----												
0776	Benzene											
	0.2 ug/l	N.D.		106	105	1	94			81	124	
0777	Toluene											
	0.2 ug/l	N.D.		105	105	0	93			84	119	
0778	Ethylbenzene											
	0.2 ug/l	N.D.		102	101	1	91			82	118	
0779	Total Xylenes											
	0.6 ug/l	N.D.		103	102	1	93			81	120	



Lancaster Laboratories  
2425 New Holland Rd.  
PO Box 12425  
Lancaster, PA 17606-2425  
717-656-2100 Fax 717-656-4107







**LLI Sample No. 3116844**  
MW-3I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	84	22	131
		Triphenyle	68	60	120
8213 BTEX (8021)		TFT	96	77	125



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

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





**LLI Sample No. WW 3116845**

Collected: 3/24/99 at 15:40 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-4S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
4S--- SDG#: MOS07-20

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:54:50 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2667





**LLI Sample No. WW 3116845**

Collected: 3/24/99 at 15:40 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-4S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
4S--- SDG#: MOS07-20

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	1,330.	17.	ug/l
3281	Acenaphthylene	N.D.	17.	ug/l
3282	Acenaphthene	610.	17.	ug/l
3283	Fluorene	271.	3.6	ug/l
3284	Phenanthrene	5.8 J	1.0	ug/l
3285	Anthracene	27.8	0.66	ug/l
3286	Fluoranthene	116.	0.43	ug/l
3287	Pyrene	106.	3.8	ug/l
3288	Benzo(a)anthracene	16.0	0.38	ug/l
3289	Chrysene	14.4	1.3	ug/l
3290	Benzo(b)fluoranthene	5.9	0.74	ug/l
3291	Benzo(k)fluoranthene	3.1	0.57	ug/l
3292	Benzo(a)pyrene	6.1	0.47	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	1.0	ug/l
3294	Benzo(g,h,i)perylene	N.D.	2.1	ug/l
3295	Indeno(1,2,3-cd)pyrene	3.6 J	1.4	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

Triphenylene recovery is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
P.O. Box 12425  
Lancaster, PA 17605-0425  
717-656-2300 Fax 717-656-2581





**LLI Sample No. WW 3116845**

Collected: 3/24/99 at 15:40 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-4S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
4S--- SDG#: MOS07-20

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
BTEX (8021)				
0776	Benzene	5.	0.2	ug/l
0777	Toluene	12.	0.2	ug/l
0778	Ethylbenzene	14.	0.2	ug/l
0779	Total Xylenes	32.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Howard Pike  
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Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2681





**LLI Sample No. WW 3116845**

Collected: 03/24/99 at 15:40 by AS

Submitted: 03/25/99

MW-4S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
4S--- SDG#: MOS07-20

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/30/99 1027	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 1247	Barry R. Shoemaker



Lancaster Laboratories  
2425 New Holland Pike  
P.O. Box 12425  
Lancaster, PA 17605-2425  
717-655-2300 Fax 717-655-2661





**LLI Sample No. 3116845**

MW-4S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----		Batch: 990850008A		-----							
1861 PAH's in Water											
3280	Naphthalene										
	17. ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene										
	17. ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene										
	17. ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene										
	3.6 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene										
	1.0 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene										
	0.66 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene										
	0.43 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene										
	3.8 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene										
	0.38 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene										
	1.3 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene										
	0.74 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene										
	0.57 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene										
	0.47 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene										
	1.0 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene										
	2.1 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene										
	1.4 ug/l	N.D.		67	74	6	104			64	134
-----		Batch: 99085A65		-----							
8213 BTEX (8021)											
0776	Benzene										
	0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
3425 Tech. Road P.O.  
PO Box 12428  
Lancaster, PA 17605-2428  
717-656-2300 Fax 717-656-0261

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/197





**LLI Sample No. 3116845**  
MW-4S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	91	22	131
		Triphenyle	484	60	120
8213 BTEX (8021)		TFT	99	77	125



Lancaster Laboratories  
2425 Westwood Ave.  
PO Box 12423  
Lancaster, PA 17602-0423  
TEL: 717-656-2300 FAX: 717-656-2661

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





**LLI Sample No. WW 3116846**

Collected: 3/24/99 at 16:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-4I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
4I--- SDG#: MOS07-21

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:55:34 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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







**LLI Sample No. WW 3116846**

Collected: 3/24/99 at 16:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-4I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

4I--- SDG#: MOS07-21

Account No: 07802  
 Kerr-McGee Corporation  
 P.O. Box 25861  
 Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
 Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION	LIMIT	UNITS
------------	---------------	---------	-----------	-------	-------

PAH's in Water

3280	Naphthalene	N.D.	0.78	ug/l
3281	Acenaphthylene	N.D.	0.78	ug/l
3282	Acenaphthene	N.D.	0.78	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	0.159 J	0.045	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	0.155 J	0.019	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	0.053 J	0.018	ug/l
3289	Chrysene	0.089 J	0.057	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	0.035 J	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.046	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.096	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.062	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
 Jenifer E. Hess, B.S.  
 Group Leader Pesticides/PCBs



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





**LLI Sample No. WW 3116846**

Collected: 3/24/99 at 16:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-4I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
4I--- SDG#: MOS07-21

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 Lewis Howard Pkwy  
PO Box 12425  
Lancaster, PA 17605-2435  
717-656-2300 Fax 717-656-2600





**LLI Sample No. WW 3116846**

Collected: 03/24/99 at 16:00 by AS

Submitted: 03/25/99

MW-4I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
4I--- SDG#: MOS07-21

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS		ANALYST
				DATE	TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99	1720	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99	0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99	0017	Barry R. Shoemaker



Lancaster Laboratories  
 2425 New Brown Rd.  
 P.O. Box 10421  
 Lancaster, PA 17609-4421  
 717-656-2300 Fax 717-656-2681





**LLI Sample No. 3116846**

MW-4I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene 0.78 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene 0.78 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene 0.78 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene 0.17 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene 0.045 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene 0.030 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene 0.019 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene 0.18 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene 0.018 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene 0.057 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene 0.034 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene 0.046 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene 0.096 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene 0.062 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene 0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes 0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
2425 New Howard Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2651

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





**LLI Sample No. 3116846**

MW-4I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	83	22	131
		Triphenyle	93	60	120
8213 BTEX (8021)		TFT	96	77	125



Lancaster Laboratories  
3125 West Howard Park  
Lancaster, PA 17602-1428  
TEL: 717-558-2300 FAX: 717-558-0661

See reverse side for explanation of symbols and abbreviations

2216 Rev. 6/4/97





Lancaster Laboratories  
A division of Thermo Analytical Inc.

LLI Sample No. WW 3117986

Collected: 3/25/99 at 08:10 by AS

Submitted: 3/26/99 Reported: 4/ 8/99  
Discard: 5/ 9/99

MW-5S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
5S--5 SDG#: MOS08-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD	
		RESULTS	DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
22:27:49 D 0003 6 128410 658794  
050 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2651





**LLI Sample No. WW 3117986**

Collected: 3/25/99 at 08:10 by AS

Submitted: 3/26/99 Reported: 4/ 8/99  
Discard: 5/ 9/99

MW-5S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
5S-5 SDG#: MOS08-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
------------	---------------	------------------------	---------------------------	-------

PAH's in Water

3280	Naphthalene	N.D.	0.80	ug/l
3281	Acenaphthylene	N.D.	0.80	ug/l
3282	Acenaphthene	N.D.	0.80	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.059	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.099	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.064	ug/l

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

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



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17602-2425  
717-656-2300 Fax 717-656-1657

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs





LLI Sample No. WW 3117986

Collected: 3/25/99 at 08:10 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

MW-5S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
5S--5 SDG#: MOS08-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



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







**LLI Sample No. WW 3117986**

Collected: 03/25/99 at 08:10 by AS

Submitted: 03/26/99

MW-5S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
5S--5 SDG#: MOS08-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	04/06/99 1439	Michelle J. Kolodziejcki
3337	PAH Water Extraction	SW-846 3510C	2	04/01/99 1800	Wanda F. Oswald
8213	BTEX (8021)	SW-846 8021B	1	03/30/99 1624	Gordon A. Lodde



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





LLI Sample No. 3117986

MW-5S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990910006A									
-----											
3280	Napthalene 0.80 ug/l	N.D.					93	95	2	37	120
3281	Acenaphthylene 0.80 ug/l	N.D.					98	99	1	41	135
3282	Acenaphthene 0.80 ug/l	N.D.					96	99	3	38	135
3283	Fluorene 0.17 ug/l	N.D.					100	103	3	41	140
3284	Phenanthrene 0.046 ug/l	N.D.					99	103	4	48	152
3285	Anthracene 0.031 ug/l	N.D.					92	97	5	42	143
3286	Fluoranthene 0.020 ug/l	N.D.					99	106	6	48	155
3287	Pyrene 0.18 ug/l	N.D.					103	110	6	51	146
3288	Benzo(a)anthracene 0.018 ug/l	N.D.					99	106	8	52	146
3289	Chrysene 0.059 ug/l	N.D.					100	109	9	56	145
3290	Benzo(b)fluoranthene 0.035 ug/l	N.D.					100	111	10	59	141
3291	Benzo(k)fluoranthene 0.027 ug/l	N.D.					99	108	9	60	137
3292	Benzo(a)pyrene 0.022 ug/l	N.D.					98	110	11	42	158
3293	Dibenzo(a,h)anthracene 0.047 ug/l	N.D.					99	110	10	49	142
3294	Benzo(g,h,i)perylene 0.099 ug/l	N.D.					105	115	9	46	148
3295	Indeno(1,2,3-cd)pyrene 0.064 ug/l	N.D.					101	111	9	64	134
-----											
8213 BTEX (8021)		Batch: 99088A51									
-----											
0776	Benzene 0.2 ug/l	N.D.		113	112	1	102			81	124
0777	Toluene 0.2 ug/l	N.D.		110	109	0	101			84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		108	107	0	102			82	118
0779	Total Xylenes 0.6 ug/l	N.D.		108	107	0	103			81	120



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

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/1/97





**LLI Sample No. 3117986**

MW-5S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	LOW	HIGH
1861 PAH's in Water		Nitrobenz	22	131
		Triphenyle	60	120
8213 BTEX (8021)		TFT	77	125



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17609-2425  
717-656-2300 Fax 717-656-2687





LLI Sample No. WW 3115838

Collected: 3/23/99 at 12:20 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-6S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
236S- SDG#: MOS07-06

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
13:00:09 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





LLI Sample No. WW 3115838

Collected: 3/23/99 at 12:20 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-6S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
236S- SDG#: MOS07-06

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.77	ug/l
3281	Acenaphthylene	N.D.	0.77	ug/l
3282	Acenaphthene	N.D.	0.77	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	N.D.	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.057	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.095	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.062	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2651





LLI Sample No. WW 3115838

Collected: 3/23/99 at 12:20 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-6S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
236S- SDG#: MOS07-06

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



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

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/11/97





**LLI Sample No. WW 3115838**

Collected: 03/23/99 at 12:20 by JA

Submitted: 03/24/99

MW-6S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
236S- SDG#: MOS07-06

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 2225	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 0606	Jodie L. Buckwalter



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





**LLI Sample No. 3115838**

MW-6S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene 0.77 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene 0.77 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene 0.77 ug/l	N.D.					89	89	0	38	135
3283	Fluorene 0.16 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene 0.044 ug/l	N.D.					90	90	0	48	152
3285	Anthracene 0.030 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene 0.019 ug/l	N.D.					90	91	1	48	155
3287	Pyrene 0.17 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.					90	91	0	52	146
3289	Chrysene 0.057 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene 0.034 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene 0.045 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene 0.095 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene 0.062 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		105	103		1	104		81	124
0777	Toluene 0.2 ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes 0.6 ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 10405  
Lincoln, RI 02840  
Tel: 401-885-1100 Fax: 401-885-1101







**LLI Sample No. 3115838**  
 MW-6S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
 Kerr-McGee Corporation

**SURROGATE SUMMARY**

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
1861 PAH's in Water		Nitrobenz	83	22	131
		Triphenyle	101	60	120
8213 BTEX (8021)		TFT	99	77	125



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





**LLI Sample No. WW 3115840**

Collected: 3/23/99 at 15:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-7S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2320S SDG#: MOS07-08

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
13:01:50 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





LLI Sample No. WW 3115840

Collected: 3/23/99 at 15:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-7S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2320S SDG#: MOS07-08

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
PAH's in Water				
3280	Naphthalene	5,560.	16.	ug/l
3281	Acenaphthylene	230.	16.	ug/l
3282	Acenaphthene	170.	16.	ug/l
3283	Fluorene	30.	3.3	ug/l
3284	Phenanthrene	N.D.	0.90	ug/l
3285	Anthracene	N.D.	0.61	ug/l
3286	Fluoranthene	N.D.	0.39	ug/l
3287	Pyrene	N.D.	3.5	ug/l
3288	Benzo(a)anthracene	N.D.	0.35	ug/l
3289	Chrysene	N.D.	1.2	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.69	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.53	ug/l
3292	Benzo(a)pyrene	N.D.	0.43	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.92	ug/l
3294	Benzo(g,h,i)perylene	N.D.	1.9	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	1.3	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 West Main and Pike  
PO Box 12425  
Lancaster, PA 17602-2425  
717-656-2300 Fax 717-656-2661





**LLI Sample No. WW 3115840**

Collected: 3/23/99 at 15:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-7S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2320S SDG#: MOS07-08

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	9.	0.2	ug/l
0777	Toluene	1.	0.2	ug/l
0778	Ethylbenzene	29.	0.2	ug/l
0779	Total Xylenes	92.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2367





**LLI Sample No. WW 3115840**

Collected: 03/23/99 at 15:00 by JA

Submitted: 03/24/99

MW-7S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2320S SDG#: MOS07-08

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1	03/31/99 1255	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 0720	Jodie L. Buckwalter



Lancaster Laboratories  
2425 New Holland Pkwy  
P.O. Box 12425  
Oklahoma City, OK 73112-0215  
Tel: 405-656-2200 Fax: 405-656-2681





**LLI Sample No. 3115840**

MW-7S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene										
16.	ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene										
16.	ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene										
16.	ug/l	N.D.					89	89	0	38	135
3283	Fluorene										
3.3	ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene										
0.90	ug/l	N.D.					90	90	0	48	152
3285	Anthracene										
0.61	ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene										
0.39	ug/l	N.D.					90	91	1	48	155
3287	Pyrene										
3.5	ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene										
0.35	ug/l	N.D.					90	91	0	52	146
3289	Chrysene										
1.2	ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene										
0.69	ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene										
0.53	ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene										
0.43	ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene										
0.92	ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene										
1.9	ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene										
1.3	ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene										
0.2	ug/l	N.D.		105	103		1	104		81	124
0777	Toluene										
0.2	ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene										
0.2	ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes										
0.6	ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 12425  
Lancaster, PA 17602-0425  
717-656-2300 Fax 717-656-2097





**LLI Sample No. 3115840**  
MW-7S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

### SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
1861 PAH's in Water		Nitrobenz	91	22	131
		Triphenyle	86	60	120
8213 BTEX (8021)		TFT	96	77	125



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2581





LLI Sample No. WW 3116836

Collected: 3/24/99 at 10:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-7I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
7I-S- SDG#: MOS07-13

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:48:26 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2687







**LLI Sample No. WW 3116836**

Collected: 3/24/99 at 10:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-7I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
7I-S- SDG#: MOS07-13

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.79	ug/l
3281	Acenaphthylene	N.D.	0.79	ug/l
3282	Acenaphthene	N.D.	0.79	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.058	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.098	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.063	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
1425 New Holland Pike  
P.O. Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2457





LLI Sample No. WW 3116836

Collected: 3/24/99 at 10:00 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-7I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
7I-S- SDG#: MOS07-13

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 10425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2657





**LLI Sample No. WW 3116836**

Collected: 03/24/99 at 10:00 by AS

Submitted: 03/25/99

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

MW-7I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
7I-S- SDG#: MOS07-13

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 1424	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 0712	Barry R. Shoemaker



Lancaster Laboratories  
 1425 West Erie and Pike  
 P.O. Box 12425  
 Lancaster, PA 17605-2425  
 717-ARL-1700 Fax 717-456-2661





**LLI Sample No. 3116836**

MW-7I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene										
	0.79 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene										
	0.79 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene										
	0.79 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene										
	0.17 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene										
	0.046 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene										
	0.031 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene										
	0.020 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene										
	0.18 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene										
	0.018 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene										
	0.058 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene										
	0.035 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene										
	0.027 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene										
	0.022 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene										
	0.047 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene										
	0.098 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.063 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-1310 Fax 717-656-2737

See reference for explanation of symbols and abbreviations.

2216 Rev. 8/1997





**LLI Sample No. 3116836**  
 MW-7I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	83	22	131
		Triphenyle	99	60	120
8213 BTEX (8021)		TFT	96	77	125



Lancaster Laboratories  
 2425 Hwy. Holland Pike  
 P.O. Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2301 Fax: 717-656-2681





LLI Sample No. WW 3117988

Collected: 3/25/99 at 10:15 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

MW-8I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
8I-5- SDG#: MOS08-05

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
1861	PAH's in Water		See Page	2
8213	BTEX (8021)		See Page	3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
22:29:16 D 0003 6 128410 658794  
050 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





**LLI Sample No. WW 3117988**

Collected: 3/25/99 at 10:15 by AS

Submitted: 3/26/99 Reported: 4/ 8/99  
Discard: 5/ 9/99

MW-8I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
8I-5- SDG#: MOS08-05

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.83	ug/l
3281	Acenaphthylene	N.D.	0.83	ug/l
3282	Acenaphthene	N.D.	0.83	ug/l
3283	Fluorene	N.D.	0.18	ug/l
3284	Phenanthrene	0.054 J	0.048	ug/l
3285	Anthracene	N.D.	0.032	ug/l
3286	Fluoranthene	0.069 J	0.021	ug/l
3287	Pyrene	N.D.	0.19	ug/l
3288	Benzo(a)anthracene	0.026 J	0.019	ug/l
3289	Chrysene	N.D.	0.061	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.036	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.028	ug/l
3292	Benzo(a)pyrene	N.D.	0.023	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.049	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.066	ug/l

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

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Blvd  
PO Box 12425  
Lancaster PA 17603-0425  
717-656-2300 Fax 717-656-2681





LLI Sample No. WW 3117988

Collected: 3/25/99 at 10:15 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

MW-8I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
8I-5- SDG#: MOS08-05

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-1081







**LLI Sample No. WW 3117988**

Collected: 03/25/99 at 10:15 by AS

Submitted: 03/26/99

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

MW-8I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
8I-5- SDG#: MOS08-05

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	04/06/99 1522	Michelle J. Kolodziejcki
3337	PAH Water Extraction	SW-846 3510C	2	04/01/99 1800	Wanda F. Oswald
8213	BTEX (8021)	SW-846 8021B	1	03/30/99 1958	Gordon A. Lodde



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





**LLI Sample No. 3117988**

MW-81-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990910006A									
-----											
3280	Naphthalene										
	0.83 ug/l	N.D.					93	95	2	37	120
3281	Acenaphthylene										
	0.83 ug/l	N.D.					98	99	1	41	135
3282	Acenaphthene										
	0.83 ug/l	N.D.					96	99	3	38	135
3283	Fluorene										
	0.18 ug/l	N.D.					100	103	3	41	140
3284	Phenanthrene										
	0.048 ug/l	N.D.					99	103	4	48	152
3285	Anthracene										
	0.032 ug/l	N.D.					92	97	5	42	143
3286	Fluoranthene										
	0.021 ug/l	N.D.					99	106	6	48	155
3287	Pyrene										
	0.19 ug/l	N.D.					103	110	6	51	146
3288	Benzo(a)anthracene										
	0.019 ug/l	N.D.					99	106	8	52	146
3289	Chrysene										
	0.061 ug/l	N.D.					100	109	9	56	145
3290	Benzo(b)fluoranthene										
	0.036 ug/l	N.D.					100	111	10	59	141
3291	Benzo(k)fluoranthene										
	0.028 ug/l	N.D.					99	108	9	60	137
3292	Benzo(a)pyrene										
	0.023 ug/l	N.D.					98	110	11	42	158
3293	Dibenzo(a,h)anthracene										
	0.049 ug/l	N.D.					99	110	10	49	142
3294	Benzo(g,h,i)perylene										
	0.10 ug/l	N.D.					105	115	9	46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.066 ug/l	N.D.					101	111	9	64	134
-----											
8213 BTEX (8021)		Batch: 99088A51									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		113	112		1	102		81	124
0777	Toluene										
	0.2 ug/l	N.D.		110	109		0	101		84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		108	107		0	102		82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		108	107		0	103		81	120



Lancaster Laboratories  
2425 New Howard Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2001

See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/1/97





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QUALITY CONTROL REPORT

Page: 6 of 6

**LLI Sample No. 3117988**

MW-8I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	98	22	131
		Triphenyle	81	60	120
8213 BTEX (8021)		TFT	98	77	125



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-1425  
717-656-2300 Fax 717-656-2683

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





LLI Sample No. WW 3115834

Collected: 3/23/99 at 09:20 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-9S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239S- SDG#: MOS07-02

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
12:56:35 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pkwy.  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2697





LLI Sample No. WW 3115834

Collected: 3/23/99 at 09:20 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-9S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239S- SDG#: MOS07-02

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.79	ug/l
3281	Acenaphthylene	N.D.	0.79	ug/l
3282	Acenaphthene	N.D.	0.79	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	0.020 <i>su</i>	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.058	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	0.037 <i>J</i>	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.046	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.098	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.063	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17609-2425  
717-656-2300 Fax: 717-656-2081





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LLI Sample No. WW 3115834

Collected: 3/23/99 at 09:20 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-9S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239S- SDG#: MOS07-02

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-1425  
717-656-2300 Fax 717-656-2691





**LLI Sample No. WW 3115834**

Collected: 03/23/99 at 09:20 by JA

Submitted: 03/24/99

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

MW-9S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239S- SDG#: MOS07-02

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 2055	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 0338	Jodie L. Buckwalter



Lancaster Laboratories  
 2425 West Highland Pike  
 PO Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax 717-656-2691





**LLI Sample No. 3115834**

MW-9S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene										
	0.79 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene										
	0.79 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene										
	0.79 ug/l	N.D.					89	89	0	38	135
3283	Fluorene										
	0.17 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene										
	0.046 ug/l	N.D.					90	90	0	48	152
3285	Anthracene										
	0.031 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene										
	0.020 ug/l	N.D.					90	91	1	48	155
3287	Pyrene										
	0.18 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene										
	0.018 ug/l	N.D.					90	91	0	52	146
3289	Chrysene										
	0.058 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene										
	0.035 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene										
	0.027 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene										
	0.022 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene										
	0.046 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene										
	0.098 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.063 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		105	103	1	104			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	102	2	103			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		103	101	2	101			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		104	102	2	103			81	120



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
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**LLI Sample No. 3115834**  
MW-9S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

### SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
1861 PAH's in Water		Nitrobenz	86	22	131
		Triphenyle	93	60	120
8213 BTEX (8021)		TFT	97	77	125



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
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See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





LLI Sample No. WW 3115835

Collected: 3/23/99 at 09:50 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-9I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239I- SDG#: MOS07-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD	
		RESULTS	DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
12:57:23 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 Hawthorn Road P.O. Box 12425  
Lancaster, PA 17602-0425  
TEL: (717) 656-2300 FAX: (717) 656-2301





**LLI Sample No. WW 3115835**

Collected: 3/23/99 at 09:50 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-9I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239I- SDG#: MOS07-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.77	ug/l
3281	Acenaphthylene	N.D.	0.77	ug/l
3282	Acenaphthene	N.D.	0.77	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	0.038 JU	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.057	ug/l
3290	Benzo(b)fluoranthene	0.042 J	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	0.042 JU	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.095	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.061	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 1240  
Lancaster, PA 17605-2425  
(717) 656-2300 Fax: 717-656-2301





**LLI Sample No. WW 3115835**

Collected: 3/23/99 at 09:50 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-9I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239I- SDG#: MOS07-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2475 West Howard Pike  
PO Box 10423  
Lancaster, PA 17605-0425  
717-656-2300 Fax 717-656-2597





LLI Sample No. WW 3115835

Collected: 03/23/99 at 09:50 by JA

Submitted: 03/24/99

MW-9I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
239I- SDG#: MOS07-03

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 2117	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 0415	Jodie L. Buckwalter



Lancaster Laboratories  
2415 New Holland Pkwy  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2691





**LLI Sample No. 3115835**

MW-9I-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene 0.77 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene 0.77 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene 0.77 ug/l	N.D.					89	89	0	38	135
3283	Fluorene 0.16 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene 0.044 ug/l	N.D.					90	90	0	48	152
3285	Anthracene 0.030 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene 0.019 ug/l	N.D.					90	91	1	48	155
3287	Pyrene 0.17 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.					90	91	0	52	146
3289	Chrysene 0.057 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene 0.034 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene 0.045 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene 0.095 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene 0.061 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		105	103		1	104		81	124
0777	Toluene 0.2 ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes 0.6 ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 New Holland Road  
PO Box 12417  
Lancaster, PA 17602-0417  
717-656-2300 Fax: 717-656-2661

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





LLI Sample No. **3115835**  
MW-91-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

### SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
1861 PAH's in Water		Nitrobenz	86	22	131
		Triphenyle	81	60	120
8213 BTEX (8021)		TFT	97	77	125



Lancaster Laboratories  
3425 New Holland Pkwy  
PO Box 11425  
Lancaster, PA 17605-2125  
717-656-2300 Fax 717-656-2681





LLI Sample No. WW 3115833

Collected: 3/23/99 at 08:35 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-10S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2310S SDG#: MOS07-01

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
12:55:16 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17609-2425  
717-656-2300 Fax 717-656-2697







**LLI Sample No. WW 3115833**

Collected: 3/23/99 at 08:35 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-10S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2310S SDG#: MOS07-01

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.76	ug/l
3281	Acenaphthylene	N.D.	0.76	ug/l
3282	Acenaphthene	N.D.	0.76	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	N.D.	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.056	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.033	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.094	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.061	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 1242b  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





LLI Sample No. WW 3115833

Collected: 3/23/99 at 08:35 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-10S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2310S SDG#: MOS07-01

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	4.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 West Howard Ave  
PO Box 12442  
Lancaster, PA 17602-0442  
717-656-2300 Fax 717-656-2651





**LLI Sample No. WW 3115833**

Collected: 03/23/99 at 08:35 by JA

Submitted: 03/24/99

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

MW-10S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2310S SDG#: MOS07-01

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1		03/29/99 2034	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1		03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1		03/26/99 0301	Jodie L. Buckwalter



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





**LLI Sample No. 3115833**

MW-10S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene 0.76 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene 0.76 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene 0.76 ug/l	N.D.					89	89	0	38	135
3283	Fluorene 0.16 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene 0.044 ug/l	N.D.					90	90	0	48	152
3285	Anthracene 0.030 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene 0.019 ug/l	N.D.					90	91	1	48	155
3287	Pyrene 0.17 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.					90	91	0	52	146
3289	Chrysene 0.056 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene 0.033 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene 0.045 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene 0.094 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene 0.061 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		105	103		1	104		81	124
0777	Toluene 0.2 ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes 0.6 ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 12425  
Lancaster, PA 17603-2425  
717-656-2200 Fax: 717-656-2687

See the appendix for explanation of symbols and abbreviations

2216 Rev. 5/4/97





**LLI Sample No. 3115833**  
MW-10S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	78	22	131
		Triphenyle	87	60	120
8213 BTEX (8021)		TFT	93	77	125





**LLI Sample No. WW 3116840**

Collected: 3/24/99 at 12:15 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-13S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
13S-5 SDG#: MOS07-15

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Gareth Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:51:28 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





**LLI Sample No. WW 3116840**

Collected: 3/24/99 at 12:15 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-13S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
13S-5 SDG#: MOS07-15

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT UNITS
------------	---------------	---------	--------	-----------------------

PAH's in Water

3280	Naphthalene	N.D.	0.78	ug/l
3281	Acenaphthylene	N.D.	0.78	ug/l
3282	Acenaphthene	N.D.	0.78	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.045	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	0.047 J	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	0.020 J	0.017	ug/l
3289	Chrysene	N.D.	0.057	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	0.025 J	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.046	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.096	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.062	ug/l

Spike recoveries for benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(a)pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 Kenilwood Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax: 717-656-2507

See reverse side for explanation of symbols and abbreviations

2216 Rev 8/4/97





LLI Sample No. **WW 3116840**

Collected: 3/24/99 at 12:15 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-13S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
13S-5 SDG#: MOS07-15

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



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







**LLI Sample No. WW 3116840**

Collected: 03/24/99 at 12:15 by AS

Submitted: 03/25/99

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

MW-13S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
13S-5 SDG#: MOS07-15

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 1446	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 0749	Barry R. Shoemaker



Lancaster Laboratories  
 1405 New Holland Pike  
 P.O. Box 10425  
 Lancaster, PA 17605-7425  
 717-656-2300 Fax: 717-656-2651





**LLI Sample No. 3116840**

MW-13S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene										
	0.78 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene										
	0.78 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene										
	0.78 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene										
	0.17 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene										
	0.045 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene										
	0.030 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene										
	0.019 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene										
	0.17 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene										
	0.017 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene										
	0.057 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene										
	0.034 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene										
	0.026 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene										
	0.021 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene										
	0.046 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene										
	0.096 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.062 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
2000 North Lincoln Avenue  
P.O. Box 1000  
Lancaster, PA 17604  
TEL: 717-397-1000 FAX: 717-397-1001





**LLI Sample No. 3116840**

MW-13S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	76	22	131
		Triphenyle	93	60	120
8213 BTEX (8021)		TFT	96	77	125





LLI Sample No. WW 3117987

Collected: 3/25/99 at 09:00 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

MW-20S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
20S-5 SDG#: MOS08-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DETECTION LIMIT	UNITS
		RESULTS	METHOD		
1861	PAH's in Water			See Page	2
8213	BTEX (8021)			See Page	3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
22:28:30 D 0003 6 128410 658794  
050 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12423  
Lancaster, PA 17605-2423  
717-656-2300 Fax 717-656-2687





LLI Sample No. WW 3117987

Collected: 3/25/99 at 09:00 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

MW-20S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
20S-5 SDG#: MOS08-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
---------	---------------	---------	-----------------	-------

PAH's in Water

3280	Naphthalene	N.D.	0.79	ug/l
3281	Acenaphthylene	N.D.	0.79	ug/l
3282	Acenaphthene	N.D.	0.79	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.059	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.098	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.064	ug/l

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

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17602-0425  
717-656-2300 Fax 717-656-2681





**LLI Sample No. WW 3117987**

Collected: 3/25/99 at 09:00 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

MW-20S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
20S-5 SDG#: MOS08-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
7415 New Holland Pike  
PO Box 12425  
Lancaster, PA 17606-2425  
717-656-2300 Fax 717-656-2287





LLI Sample No. **WW 3117987**

Collected: 03/25/99 at 09:00 by AS

Submitted: 03/26/99

MW-20S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
20S-5 SDG#: MOS08-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	04/06/99 1500	Michelle J. Kolodziejcki
3337	PAH Water Extraction	SW-846 3510C	2	04/01/99 1800	Wanda F. Oswald
8213	BTEX (8021)	SW-846 8021B	1	03/30/99 1659	Gordon A. Lodde



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





**LLI Sample No. 3117987**

MW-20S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990910006A									
-----											
3280	Naphthalene	N.D.					93	95	2	37	120
	0.79 ug/l										
3281	Acenaphthylene	N.D.					98	99	1	41	135
	0.79 ug/l										
3282	Acenaphthene	N.D.					96	99	3	38	135
	0.79 ug/l										
3283	Fluorene	N.D.					100	103	3	41	140
	0.17 ug/l										
3284	Phenanthrene	N.D.					99	103	4	48	152
	0.046 ug/l										
3285	Anthracene	N.D.					92	97	5	42	143
	0.031 ug/l										
3286	Fluoranthene	N.D.					99	106	6	48	155
	0.020 ug/l										
3287	Pyrene	N.D.					103	110	6	51	146
	0.18 ug/l										
3288	Benzo(a)anthracene	N.D.					99	106	8	52	146
	0.018 ug/l										
3289	Chrysene	N.D.					100	109	9	56	145
	0.059 ug/l										
3290	Benzo(b)fluoranthene	N.D.					100	111	10	59	141
	0.035 ug/l										
3291	Benzo(k)fluoranthene	N.D.					99	108	9	60	137
	0.027 ug/l										
3292	Benzo(a)pyrene	N.D.					98	110	11	42	158
	0.022 ug/l										
3293	Dibenzo(a,h)anthracene	N.D.					99	110	10	49	142
	0.047 ug/l										
3294	Benzo(g,h,i)perylene	N.D.					105	115	9	46	148
	0.098 ug/l										
3295	Indeno(1,2,3-cd)pyrene	N.D.					101	111	9	64	134
	0.064 ug/l										
-----											
8213 BTEX (8021)		Batch: 99088A51									
-----											
0776	Benzene	N.D.		113	112	1	102			81	124
	0.2 ug/l										
0777	Toluene	N.D.		110	109	0	101			84	119
	0.2 ug/l										
0778	Ethylbenzene	N.D.		108	107	0	102			82	118
	0.2 ug/l										
0779	Total Xylenes	N.D.		108	107	0	103			81	120
	0.6 ug/l										



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 12425  
Lancaster, PA 17603-2425  
717-650-2310 Fax: 717-650-2657

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97







**LLI Sample No. 3117987**

MW-20S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	94	22	131
		Triphenyle	104	60	120
8213 BTEX (8021)		TFT	96	77	125



2170 Interlaken Way  
2425 New Howard Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2627





LLI Sample No. WW 3116841

Collected: 3/24/99 at 13:35 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-25S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
25S-5 SDG#: MOS07-16

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:52:11 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 FAX 717-656-2321





**LLI Sample No. WW 3116841**

Collected: 3/24/99 at 13:35 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-25S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
25S-5 SDG#: MOS07-16

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

**AS RECEIVED**

CAT NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT	UNITS
<b>PAH's in Water</b>				
3280	Naphthalene	N.D.	0.76	ug/l
3281	Acenaphthylene	N.D.	0.76	ug/l
3282	Acenaphthene	N.D.	0.76	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	N.D.	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.056	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.033	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.095	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.061	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2420 New York Avenue  
P.O. Box 12425  
Lancaster, PA 17606-7425  
717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

2216 Rev 6/4/97





LLI Sample No. WW 3116841

Collected: 3/24/99 at 13:35 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-25S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
25S-5 SDG#: MOS07-16

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2405 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2125  
717-656-2300 Fax 717-656-2061





**LLI Sample No. WW 3116841**

Collected: 03/24/99 at 13:35 by AS

Submitted: 03/25/99

MW-25S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
25S-5 SDG#: MOS07-16

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 1507	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 0826	Barry R. Shoemaker



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12426  
Lancaster, PA 17605-2426  
717-650-2970 Fax 717-650-2681





**LLI Sample No. 3116841**

MW-25S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene 0.76 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene 0.76 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene 0.76 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene 0.16 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene 0.044 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene 0.030 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene 0.019 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene 0.17 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene 0.056 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene 0.033 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene 0.045 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene 0.095 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene 0.061 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene 0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes 0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 10425  
Lancaster, PA 17602-0425  
717-656-2300 Fax 717-656-2667

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





**LLI Sample No. 3116841**

MW-25S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	90	22	131
		Triphenyle	100	60	120
8213 BTEX (8021)		TFT	102	77	125



Lancaster Laboratories  
2420 New Holland Pike  
PO Box 12425  
Lancaster, PA 17609-2425  
TEL: 656-2300 FAX: 656-2681

See reverse side for explanation of symbols and abbreviations

2216 Rev 8/4/97





LLI Sample No. WW 3116842

Collected: 3/24/99 at 14:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-26S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
26S-5 SDG#: MOS07-17

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:52:50 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17601-2425  
(717) 656-2300 Fax (717) 656-2897

For more information on explanation of symbols and abbreviations

2216 Rev 8/14/97







**LLI Sample No. WW 3116842**

Collected: 3/24/99 at 14:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-26S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
26S-5 SDG#: MOS07-17

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.80	ug/l
3281	Acenaphthylene	N.D.	0.80	ug/l
3282	Acenaphthene	N.D.	0.80	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	0.021 J	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.059	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.098	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.064	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
1425 Lewis Road, P.O. Box 1242  
Lancaster, PA 17603-1425  
717-656-2300 Fax 717-656-2001

See reverse side for explanation of symbols and abbreviations

2216 Rev 8/4/97





**LLI Sample No. WW 3116842**

Collected: 3/24/99 at 14:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-26S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
26S-5 SDG#: MOS07-17

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 Hwy. Holland Pk.  
PO Box 12425  
Lancaster, PA 17606-2425  
717-656-2300 Fax 717-656-2301





**LLI Sample No. WW 3116842**

Collected: 03/24/99 at 14:10 by AS

Submitted: 03/25/99

MW-26S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
26S-5 SDG#: MOS07-17

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1	03/29/99 1529	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 0903	Barry R. Shoemaker



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





**LLI Sample No. 3116842**

MW-26S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene										
	0.80 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene										
	0.80 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene										
	0.80 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene										
	0.17 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene										
	0.046 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene										
	0.031 ug/l	N.D.		82	85	2	89			42	143
3286	Fluorantene										
	0.020 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene										
	0.18 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene										
	0.018 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene										
	0.059 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene										
	0.035 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene										
	0.027 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene										
	0.022 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene										
	0.047 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene										
	0.098 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.064 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17602-0425  
717-656-2500 Fax: 717-656-2527

See reverse side for explanation of symbols and abbreviations

2216 Rev. 6/4/97





LLI Sample No. 3116842

MW-26S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	79	22	131
		Triphenyle	89	60	120
8213 BTEX (8021)		TFT	96	77	125





LLI Sample No. WW 3115839

Collected: 3/23/99 at 12:50 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-27S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2327S SDG#: MOS07-07

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
13:01:11 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





**LLI Sample No. WW 3115839**

Collected: 3/23/99 at 12:50 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-27S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2327S SDG#: MOS07-07

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.76	ug/l
3281	Acenaphthylene	N.D.	0.76	ug/l
3282	Acenaphthene	N.D.	0.76	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	N.D.	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.056	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.033	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.095	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.061	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



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





**Lancaster Laboratories**  
A division of Thermo Analytical Inc.

**LLI Sample No. WW 3115839**

Collected: 3/23/99 at 12:50 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-27S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2327S SDG#: MOS07-07

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Park  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2667







## Lancaster Laboratories

A division of Thermo Analytical Inc.

LABORATORY CHRONICLE

Page: 4 of 6

LLI Sample No. WW 3115839

Collected: 03/23/99 at 12:50 by JA

Submitted: 03/24/99

MW-27S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2327S SDG#: MOS07-07

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1		03/29/99 2246	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1		03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1		03/26/99 0643	Jodie L. Buckwalter



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





**LLI Sample No. 3115839**

MW-27S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene 0.76 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene 0.76 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene 0.76 ug/l	N.D.					89	89	0	38	135
3283	Fluorene 0.16 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene 0.044 ug/l	N.D.					90	90	0	48	152
3285	Anthracene 0.030 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene 0.019 ug/l	N.D.					90	91	1	48	155
3287	Pyrene 0.17 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.					90	91	0	52	146
3289	Chrysene 0.056 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene 0.033 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene 0.045 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene 0.095 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene 0.061 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		105	103	1	104			81	124
0777	Toluene 0.2 ug/l	N.D.		105	102	2	103			84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		103	101	2	101			82	118
0779	Total Xylenes 0.6 ug/l	N.D.		104	102	2	103			81	120



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

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





**LLI Sample No. 3115839**

MW-27S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	LOW	HIGH
1861 PAH's in Water		Nitrobenz	22	131
		Triphenyle	60	120
8213 BTEX (8021)		TFT	77	125



Lancaster Laboratories  
2425 New Holland Pike  
P.O. Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2651

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





**LLI Sample No. WW 3116837**

Collected: 3/24/99 at 11:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-28S-5 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14BKG

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:49:11 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
1425 New Center Pike  
PO Box 10428  
Lancaster, PA 17601-0428  
717-656-2300 Fax 717-656-2687





**LLI Sample No. WW 3116837**

Collected: 3/24/99 at 11:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-28S-5 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14BKG

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.77	ug/l
3281	Acenaphthylene	N.D.	0.77	ug/l
3282	Acenaphthene	N.D.	0.77	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	0.33	0.044	ug/l
3285	Anthracene	0.167 J	0.030	ug/l
3286	Fluoranthene	1.52	0.019	ug/l
3287	Pyrene	1.79	0.17	ug/l
3288	Benzo(a)anthracene	0.556	0.017	ug/l
3289	Chrysene	1.43	0.057	ug/l
3290	Benzo(b)fluoranthene	2.32	0.034	ug/l
3291	Benzo(k)fluoranthene	0.813	0.026	ug/l
3292	Benzo(a)pyrene	1.94	0.021	ug/l
3293	Dibenzo(a,h)anthracene	0.24	0.045	ug/l
3294	Benzo(g,h,i)perylene	2.31	0.095	ug/l
3295	Indeno(1,2,3-cd)pyrene	2.38	0.061	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



AGIL  
MEMBER  
AGIL  
AGIL  
AGIL





LLI Sample No. WW 3116837

Collected: 3/24/99 at 11:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-28S-5 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14BKG

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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.

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12426  
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See reverse side for explanation of symbols and abbreviations

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**LLI Sample No. WW 3116837**

Collected: 03/24/99 at 11:10 by AS

Submitted: 03/25/99

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

MW-28S-5 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14BKG

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/31/99 1316	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 2033	Barry R. Shoemaker



Lancaster Laboratories  
1405 North Lincoln Ave  
P.O. Box 12433  
Lancaster, PA 17602-0433  
717-656-2300 Fax 717-656-2681





LLI Sample No. **3116837**  
 MW-28S-5 Unspiked Grab Water Sample  
 Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
-----		Batch: 990850008A										
1861 PAH's in Water												
3280	Naphthalene											
	0.77 ug/l	N.D.		88	93	4	88			37	120	
3281	Acenaphthylene											
	0.77 ug/l	N.D.		90	95	4	89			41	135	
3282	Acenaphthene											
	0.77 ug/l	N.D.		90	95	4	89			38	135	
3283	Fluorene											
	0.16 ug/l	N.D.		93	97	3	93			41	140	
3284	Phenanthrene											
	0.044 ug/l	N.D.		86	90	3	93			48	152	
3285	Anthracene											
	0.030 ug/l	N.D.		82	85	2	89			42	143	
3286	Fluoranthene											
	0.019 ug/l	N.D.		52	61	8	96			48	155	
3287	Pyrene											
	0.17 ug/l	N.D.		96	97	0	103			51	146	
3288	Benzo(a)anthracene											
	0.017 ug/l	N.D.		66	70	3	97			52	146	
3289	Chrysene											
	0.057 ug/l	N.D.		83	81	3	100			56	145	
3290	Benzo(b)fluoranthene											
	0.034 ug/l	N.D.		-63	-40	17	99			59	141	
3291	Benzo(k)fluoranthene											
	0.026 ug/l	N.D.		39	47	7	97			60	137	
3292	Benzo(a)pyrene											
	0.021 ug/l	N.D.		-4	13	13	100			42	158	
3293	Dibenzo(a,h)anthracene											
	0.045 ug/l	N.D.		90	92	1	100			49	142	
3294	Benzo(g,h,i)perylene											
	0.095 ug/l	N.D.		87	91	3	105			46	148	
3295	Indeno(1,2,3-cd)pyrene											
	0.061 ug/l	N.D.		67	74	6	104			64	134	
-----		Batch: 99085A65										
8213 BTEX (8021)												
0776	Benzene											
	0.2 ug/l	N.D.		106	105	1	94			81	124	
0777	Toluene											
	0.2 ug/l	N.D.		105	105	0	93			84	119	
0778	Ethylbenzene											
	0.2 ug/l	N.D.		102	101	1	91			82	118	
0779	Total Xylenes											
	0.6 ug/l	N.D.		103	102	1	93			81	120	



Lancaster Laboratories  
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 Lancaster, PA 17605-2425  
 717-655-4300 Fax 717-655-2621

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/1/97







**LLI Sample No. WW 3116838**

Collected: 03/24/99 at 11:10 by AS

Submitted: 03/25/99

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

MW-28S-5 Matrix Spike Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14MS

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/31/99 1338	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 2110	Barry R. Shoemaker



Lancaster Laboratories  
2425 New Holland Pike  
P.O. Box 12425  
Lancaster, PA 17605-2425  
Tel: 717-656-2681





**LLI Sample No. 3116838**  
 MW-28S-5 Matrix Spike Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene										
	0.80 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene										
	0.80 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene										
	0.8 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene										
	0.17 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene										
	0.046 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene										
	0.031 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene										
	0.020 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene										
	0.18 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene										
	0.018 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene										
	0.059 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene										
	0.035 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene										
	0.027 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene										
	0.022 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene										
	0.047 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene										
	0.099 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.064 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
 2425 New Holland Pike  
 PO Box 12425  
 Lancaster, PA 17605-2425  
 717-650-2800 Fax 717-650-2681





**LLI Sample No. 3116838**  
MW-28S-5 Matrix Spike Grab Water Sample  
Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	LOW	HIGH
1861 PAH's in Water		Nitrobenz	22	131
		Triphenyle	60	120
8213 BTEX (8021)		TFT	77	125



Lancaster Laboratories  
246 S. Newlin Road, P.O. Box 12429  
Lancaster, PA 17605-2425  
TEL: 656-2200 FAX: 656-2431

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





Lancaster Laboratories  
A division of Thermo Analytical Inc.

LLI Sample No. WW 3116839

Collected: 3/24/99 at 11:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-28S-5 Matrix Spike Duplicate Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14MSD

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
19:50:47 D 0003 12 128410 658572  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2201





**LLI Sample No. WW 3116839**

Collected: 3/24/99 at 11:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

Account No: 07802  
 Kerr-McGee Corporation  
 P.O. Box 25861  
 Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
 Rel.

MW-28S-5 Matrix Spike Duplicate Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
 28S-5 SDG#: MOS07-14MSD

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	185.	0.79	ug/l
3281	Acenaphthylene	188.	0.79	ug/l
3282	Acenaphthene	190.	0.79	ug/l
3283	Fluorene	19.2	0.17	ug/l
3284	Phenanthrene	5.65	0.046	ug/l
3285	Anthracene	2.69	0.031	ug/l
3286	Fluoranthene	3.32	0.020	ug/l
3287	Pyrene	21.0	0.18	ug/l
3288	Benzo(a)anthracene	1.59	0.018	ug/l
3289	Chrysene	6.23	0.058	ug/l
3290	Benzo(b)fluoranthene	1.85	0.035	ug/l
3291	Benzo(k)fluoranthene	1.37	0.027	ug/l
3292	Benzo(a)pyrene	2.14	0.022	ug/l
3293	Dibenzo(a,h)anthracene	2.97	0.046	ug/l
3294	Benzo(g,h,i)perylene	13.1	0.098	ug/l
3295	Indeno(1,2,3-cd)pyrene	6.76	0.063	ug/l

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

Respectfully Submitted  
 Jenifer E. Hess, B.S.  
 Group Leader Pesticides/PCBs



Lancaster Laboratories  
 2425 West Howard Ave  
 PO Box 10425  
 Columbia, MO 65208-0425  
 TEL: 656-2300 FAX: 656-2631





LLI Sample No. **ww 3116839**

Collected: 3/24/99 at 11:10 by AS

Submitted: 3/25/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-28S-5 Matrix Spike Duplicate Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14MSD

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	21.	0.2	ug/l
0777	Toluene	21.	0.2	ug/l
0778	Ethylbenzene	20.	0.2	ug/l
0779	Total Xylenes	61.	0.6	ug/l

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.

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2581





**LLI Sample No. WW 3116837**

Collected: 03/24/99 at 11:10 by AS

Submitted: 03/25/99

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

MW-28S-5 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
28S-5 SDG#: MOS07-14BKG

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1	03/31/99 1316	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 2033	Barry R. Shoemaker



Lancaster Laboratories  
2400 N. Lincoln Ave  
P.O. Box 1433  
Lancaster, PA 17604-0143  
717-656-2300 Fax 717-656-2661





LLI Sample No. 3116837

MW-28S-5 Unspiked Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene										
	0.77 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene										
	0.77 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene										
	0.77 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene										
	0.16 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene										
	0.044 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene										
	0.030 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene										
	0.019 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene										
	0.17 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene										
	0.017 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene										
	0.057 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene										
	0.034 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene										
	0.026 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene										
	0.021 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene										
	0.045 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene										
	0.095 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.061 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		103	102	1	93			81	120



Lancaster Laboratories  
2405 New Holland Park  
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(See reverse side for explanation of symbols and abbreviations)

2216 Rev. 8/4/97







LLI Sample No. **3116839**  
 MW-28S-5 Matrix Spike Duplicate Grab Water Sample  
 Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	87	22	131
		Triphenyle	91	60	120
8213 BTEX (8021)		TFT	96	77	125



Lancaster Laboratories  
 2425 West Holland Pike  
 PO Box 10425  
 Lancaster, PA 17603-2425  
 717-656-2300 Fax 717-656-2687





LLI Sample No. WW 3115836

Collected: 3/23/99 at 11:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

MW-29S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2329S SDG#: MOS07-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
12:58:01 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2400 Hwy. Holland Pkwy  
P.O. Box 12425  
Lancaster, PA 17611-2425  
717-656-2300 Fax 717-656-2301





LLI Sample No. WW 3115836

Collected: 3/23/99 at 11:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-29S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2329S SDG#: MOS07-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.82	ug/l
3281	Acenaphthylene	N.D.	0.82	ug/l
3282	Acenaphthene	N.D.	0.82	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.047	ug/l
3285	Anthracene	N.D.	0.032	ug/l
3286	Fluoranthene	0.050 <i>su</i>	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.060	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.036	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.028	ug/l
3292	Benzo(a)pyrene	N.D.	0.023	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.048	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.066	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax: 717-656-1691

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





LLI Sample No. WW 3115836

Collected: 3/23/99 at 11:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

MW-29S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2329S SDG#: MOS07-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-7425  
(717) 656-2300 Fax: (717) 656-2681

See reverse side for explanation of symbols and abbreviations

2216 Rev: 6/4/97





**LLI Sample No. WW 3115836**

Collected: 03/23/99 at 11:00 by JA

Submitted: 03/24/99

MW-29S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2329S SDG#: MOS07-04

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 2138	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 0452	Jodie L. Buckwalter



Lancaster Laboratories  
3477 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2551





**LLI Sample No. 3115836**

MW-29S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene 0.82 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene 0.82 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene 0.82 ug/l	N.D.					89	89	0	38	135
3283	Fluorene 0.17 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene 0.047 ug/l	N.D.					90	90	0	48	152
3285	Anthracene 0.032 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene 0.020 ug/l	N.D.					90	91	1	48	155
3287	Pyrene 0.18 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene 0.018 ug/l	N.D.					90	91	0	52	146
3289	Chrysene 0.060 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene 0.036 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene 0.028 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene 0.023 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene 0.048 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene 0.10 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene 0.066 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		105	103		1	104		81	124
0777	Toluene 0.2 ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes 0.6 ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 Newburg Road Pike  
PO Box 10426  
Lancaster, PA 17605-0426  
717-656-2300 Fax 717-650-266





LLI Sample No. 3115836  
 MW-29S-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
 Kerr-McGee Corporation

SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
1861 PAH's in Water		Nitrobenz	82	22	131
		Triphenyle	95	60	120
8213 BTEX (8021)		TFT	98	77	125



Lancaster Laboratories  
 2425 New Holland Pike  
 P.O. Box 11425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax 717-656-2667





LLI Sample No. WW 3115837

Collected: 3/23/99 at 12:15 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

TW-05-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2305- SDG#: MOS07-05

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
12:58:51 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17602-0425  
717-656-2300 Fax 717-656-4300







**LLI Sample No. WW 3115837**

Collected: 3/23/99 at 12:15 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

TW-05-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2305- SDG#: MOS07-05

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS		METHOD	
				DETECTION	LIMIT UNITS
PAH's in Water					
3280	Naphthalene	19.9	J	3.8	ug/l
3281	Acenaphthylene	14.6	J	3.8	ug/l
3282	Acenaphthene	110.		3.8	ug/l
3283	Fluorene	65.4		0.81	ug/l
3284	Phenanthrene	2.1		0.22	ug/l
3285	Anthracene	4.5		0.15	ug/l
3286	Fluoranthene	27.5		0.095	ug/l
3287	Pyrene	26.8		0.86	ug/l
3288	Benzo(a)anthracene	4.49		0.086	ug/l
3289	Chrysene	5.1		0.28	ug/l
3290	Benzo(b)fluoranthene	2.02		0.17	ug/l
3291	Benzo(k)fluoranthene	1.06		0.13	ug/l
3292	Benzo(a)pyrene	2.10		0.10	ug/l
3293	Dibenzo(a,h)anthracene	0.35	J	0.22	ug/l
3294	Benzo(g,h,i)perylene	0.54	J	0.47	ug/l
3295	Indeno(1,2,3-cd)pyrene	1.09	J	0.31	ug/l

Recovery for the Triphenylene surrogate fell outside the QC limits. This is due to interference from the sample matrix.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster PA 17605-0425  
717-656-2300 Fax 717-656-2681





LLI Sample No. WW 3115837

Collected: 3/23/99 at 12:15 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

TW-05-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2305- SDG#: MOS07-05

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 West Holland Road  
PO Box 12425  
Lancaster, PA 17602-0425  
717-656-2300 Fax 717-656-2000





**LLI Sample No. WW 3115837**

Collected: 03/23/99 at 12:15 by JA

Submitted: 03/24/99

TW-05-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2305- SDG#: MOS07-05

Account No: 07802  
 Kerr-McGee Corporation  
 P.O. Box 25861  
 Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 2203	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 0529	Jodie L. Buckwalter



Lancaster Laboratories  
 1425 West Holland Pike  
 PO Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax 717-656-2661





**LLI Sample No. 3115837**

TW-05-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
1861 PAH's in Water		Batch: 990840015A									
3280	Naphthalene										
	3.8 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene										
	3.8 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene										
	3.8 ug/l	N.D.					89	89	0	38	135
3283	Fluorene										
	0.81 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene										
	0.22 ug/l	N.D.					90	90	0	48	152
3285	Anthracene										
	0.15 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene										
	0.095 ug/l	N.D.					90	91	1	48	155
3287	Pyrene										
	0.86 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene										
	0.086 ug/l	N.D.					90	91	0	52	146
3289	Chrysene										
	0.28 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene										
	0.17 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene										
	0.13 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene										
	0.10 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene										
	0.22 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene										
	0.47 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.31 ug/l	N.D.					98	99	1	64	134
8213 BTEX (8021)		Batch: 99084A65									
0776	Benzene										
	0.2 ug/l	N.D.		105	103		1	104		81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17602-0425  
717-391-2311 Fax 717-391-2312

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





**LLI Sample No. 3115837**  
TW-05-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

	SURROGATE SUMMARY			SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz Triphenyle	69 236	22 60	131 120
8213 BTEX (8021)		TFT	98	77	125



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





**LLI Sample No. WW 3115841**

Collected: 3/23/99 at 15:45 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

TW-09-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2309- SDG#: MOS07-09

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD	
		RESULTS	DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
13:02:36 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pkwy  
PO Box 10425  
Lancaster, PA 17602-0425  
717-656-2300 Fax: 717-656-2301





**LLI Sample No. WW 3115841**

Collected: 3/23/99 at 15:45 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

TW-09-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2309- SDG#: MOS07-09

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	9,500.	J 1,600.	ug/l
3281	Acenaphthylene	N.D.	1,600.	ug/l
3282	Acenaphthene	5,200.	J 1,600.	ug/l
3283	Fluorene	4,300.	340.	ug/l
3284	Phenanthrene	11,100.	91.	ug/l
3285	Anthracene	1,180.	62.	ug/l
3286	Fluoranthene	4,730.	40.	ug/l
3287	Pyrene	4,800.	360.	ug/l
3288	Benzo(a)anthracene	730.	36.	ug/l
3289	Chrysene	810.	120.	ug/l
3290	Benzo(b)fluoranthene	240.	70.	ug/l
3291	Benzo(k)fluoranthene	130.	54.	ug/l
3292	Benzo(a)pyrene	240.	44.	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	93.	ug/l
3294	Benzo(g,h,i)perylene	N.D.	200.	ug/l
3295	Indeno(1,2,3-cd)pyrene	140.	J 130.	ug/l

Recovery for the Triphenylene surrogate fell outside the QC limits due to the level of dilution required and/or matrix interference.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 10425  
Lancaster, PA 17609-2425  
717-656-2300 Fax 717-656-2661





**LLI Sample No. WW 3115841**

Collected: 3/23/99 at 15:45 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

TW-09-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2309- SDG#: MOS07-09

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
------------	---------------	------------------------	---------------------------	-------

BTEX (8021)

0776	Benzene	0.3	J	0.2	ug/l
0777	Toluene	2.		0.2	ug/l
0778	Ethylbenzene	10.		0.2	ug/l
0779	Total Xylenes	26.		0.6	ug/l

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.

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-0425  
717-656-2300 Fax 717-656-2355





**LLI Sample No. WW 3115841**

Collected: 03/23/99 at 15:45 by JA

Submitted: 03/24/99

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

TW-09-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2309- SDG#: MOS07-09

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/30/99 0902	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Gineille L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 0757	Jodie L. Buckwalter



Lancaster Laboratories  
 2425 New Holland Pike  
 PO Box 10425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax 717-656-2681





**LLI Sample No. 3115841**

TW-09-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene										
1,600.	ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene										
1,600.	ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene										
1,600.	ug/l	N.D.					89	89	0	38	135
3283	Fluorene										
340.	ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene										
91.	ug/l	N.D.					90	90	0	48	152
3285	Anthracene										
62.	ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene										
40.	ug/l	N.D.					90	91	1	48	155
3287	Pyrene										
360.	ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene										
36.	ug/l	N.D.					90	91	0	52	146
3289	Chrysene										
120.	ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene										
70.	ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene										
54.	ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene										
44.	ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene										
93.	ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene										
200.	ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene										
130.	ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene										
0.2	ug/l	N.D.		105	103		1	104		81	124
0777	Toluene										
0.2	ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene										
0.2	ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes										
0.6	ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories, Inc.  
2425 North Howard Drive  
PO Box 12425  
Lancaster, PA 17605-2425  
717-651-2500 Fax 717-651-2501

See the glossary for explanation of symbols and abbreviations.

2216 Rev. 5/14/97





**LLI Sample No. 3115841**  
TW-09-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz Triphenyle	77 (5)	22 60	131 120
8213 BTEX (8021)		TFT	100	77	125

(5) Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.



Lancaster Laboratories  
1400 New Holland Pike  
PO Box 10425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2621

See reverse side for explanation of symbols and abbreviations

2216 Rev 8/4/97





LLI Sample No. WW 3115843

Collected: 3/23/99 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

FD-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
23FD- SDG#: MOS07-11

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
13:04:06 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12413  
Lancaster, PA 17605-2425  
Tel: 717-656-2300 Fax: 717-656-2661





LLI Sample No. WW 3115843

Collected: 3/23/99 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

FD-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
23FD- SDG#: MOS07-11

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO. ANALYSIS NAME RESULTS METHOD DETECTION LIMIT UNITS

PAH's in Water

Table with 4 columns: CAT NO., ANALYSIS NAME, RESULTS, METHOD DETECTION LIMIT UNITS. Rows include Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
1425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
(717-656-2300 Fax: 717-656-2691





**LLI Sample No. WW 3115843**

Collected: 3/23/99 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

FD-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
23FD- SDG#: MOS07-11

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 West Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2337





**LLI Sample No. WW 3115843**  
Collected: 03/23/99 by JA

Submitted: 03/24/99

Account No: 07902  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

FD-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
23FD- SDG#: MOS07-11

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1	03/30/99 0038	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 1327	Jodie L. Buckwalter



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





**LLI Sample No. 3115843**

FD-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene										
	0.78 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene										
	0.78 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene										
	0.78 ug/l	N.D.					89	89	0	38	135
3283	Fluorene										
	0.17 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene										
	0.045 ug/l	N.D.					90	90	0	48	152
3285	Anthracene										
	0.030 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene										
	0.020 ug/l	N.D.					90	91	1	48	155
3287	Pyrene										
	0.18 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene										
	0.018 ug/l	N.D.					90	91	0	52	146
3289	Chrysene										
	0.058 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene										
	0.034 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene										
	0.026 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene										
	0.021 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene										
	0.046 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene										
	0.097 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.062 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		105	103		1	104		81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-657-2301 Fax 717-657-2661

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 6/1/97







**LLI Sample No. 3115843**  
 FD-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
 Kerr-McGee Corporation

**SURROGATE SUMMARY**

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
1861 PAH's in Water		Nitrobenz	91	22	131
		Triphenyle	97	60	120
8213 BTEX (8021)		TFT	97	77	125



Lancaster Laboratories  
 2425 New Holland Pike  
 PO Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax 717-656-2651





LLI Sample No. WW 3116848

Collected: 3/24/99 by AS

Submitted: 3/25/99 Reported: 4/ 6/99

Discard: 5/ 7/99

FD-02-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FD02- SDG#: MOS08-01

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
10:23:18 D 0003 2 128410 658573  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 West Howard Park  
PO Box 12425  
Lancaster, PA 17605-1425  
717-656-2300 Fax 717-656-2657





**LLI Sample No. WW 3116848**  
 Collected: 3/24/99 by AS

Submitted: 3/25/99 Reported: 4/ 6/99  
 Discard: 5/ 7/99

FD-02-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
 FD02- SDG#: MOS08-01

Account No: 07802  
 Kerr-McGee Corporation  
 P.O. Box 25861  
 Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
 Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.77	ug/l
3281	Acenaphthylene	N.D.	0.77	ug/l
3282	Acenaphthene	N.D.	0.77	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	0.034 J	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.057	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.095	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.061	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
 Jenifer E. Hess, B.S.  
 Group Leader Pesticides/PCBs



Lancaster Laboratories  
 1425 New Holland Pike  
 P.O. Box 12425  
 Lancaster, PA 17605-2425  
 (717) 656-2300 Fax: (717) 656-2661





LLI Sample No. WW 3116848

Collected: 3/24/99 by AS

Submitted: 3/25/99 Reported: 4/ 6/99

Discard: 5/ 7/99

FD-02-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FD02- SDG#: MOS08-01

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Re1.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Hope Pike  
FD02-12425  
Lancaster, PA 17603-2425  
TEL: (717) 656-2300 FAX: (717) 656-2657

The following is the explanation of symbols and abbreviations

2216 Rev. 6/1/97





**LLI Sample No. WW 3116848**

Collected: 03/24/99 by AS

Submitted: 03/25/99

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125
---

FD-02-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FD02- SDG#: MOS08-01

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1	03/29/99 1803	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 0251	Barry R. Shoemaker



Lancaster Laboratories  
 1111 New Holland Blvd  
 P.O. Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax 717-656-2081





**LLI Sample No. 3116848**  
FD-02-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658573  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene 0.77 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene 0.77 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene 0.77 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene 0.16 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene 0.044 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene 0.030 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene 0.019 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene 0.17 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene 0.057 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene 0.034 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene 0.045 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene 0.095 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene 0.061 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene 0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes 0.6 ug/l	N.D.		103	102	1	93			81	120





**LLI Sample No. 3116848**  
FD-02-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658573  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	89	22	131
		Triphenyle	98	60	120
8213 BTEX (8021)		TFT	97	77	125



Lancaster Laboratories  
3425 New Holland Pike  
PO Box 12415  
Lancaster, PA 17605-2425  
TEL: 656-2200 Fax: 717-656-2481

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





LLI Sample No. WW **3117990**  
Collected: 3/25/99 by AS

Submitted: 3/26/99 Reported: 4/ 8/99  
Discard: 5/ 9/99

FD-03-5 Field Dup Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FD-03 SDG#: MOS08-07

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
1861	PAH's in Water		See Page	2
8213	BTEX (8021)		See Page	3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
22:30:42 D 0003 6 128410 658794  
050 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Rd -  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2651







**LLI Sample No. WW 3117990**

Collected: 3/25/99 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

FD-03-5 Field Dup Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FD-03 SDG#: MOS08-07

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
------------	---------------	---------	-----------------	-------

PAH's in Water

3280	Naphthalene	N.D.	0.81	ug/l
3281	Acenaphthylene	N.D.	0.81	ug/l
3282	Acenaphthene	N.D.	0.81	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.047	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.060	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.048	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.065	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 West Broadway Pike  
PO Box 12428  
Lancaster PA 17605-2428  
Tel: 610-391-3100 Fax: 717-656-2300

see reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





LLI Sample No. **ww 3117990**  
 Collected: 3/25/99 by AS

Submitted: 3/26/99 Reported: 4/ 8/99  
 Discard: 5/ 9/99

FD-03-5 Field Dup Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
 FD-03 SDG#: MOS08-07

Account No: 07802  
 Kerr-McGee Corporation  
 P.O. Box 25861  
 Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
 Michele Turner, B.A.  
 Manager, Volatiles



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

See reverse side for explanation of symbols and abbreviations

2216 Rev 8/4/97





**LLI Sample No. WW 3117990**  
Collected: 03/25/99 by AS

Submitted: 03/26/99

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

FD-03-5 Field Dup Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FD-03 SDG#: MOS08-07

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	04/06/99 1605	Michelle J. Kolodziejcki
3337	PAH Water Extraction	SW-846 3510C	2	04/01/99 1800	Wanda F. Oswald
8213	BTEX (8021)	SW-846 8021B	1	03/30/99 2110	Gordon A. Lodde



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2530 Fax 717-656-2681





**LLI Sample No. 3117990**  
 FD-03-5 Field Dup Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990910006A									
-----											
3280	Naphthalene										
	0.81 ug/l	N.D.					93	95	2	37	120
3281	Acenaphthylene										
	0.81 ug/l	N.D.					98	99	1	41	135
3282	Acenaphthene										
	0.81 ug/l	N.D.					96	99	3	38	135
3283	Fluorene										
	0.17 ug/l	N.D.					100	103	3	41	140
3284	Phenanthrene										
	0.047 ug/l	N.D.					99	103	4	48	152
3285	Anthracene										
	0.031 ug/l	N.D.					92	97	5	42	143
3286	Fluoranthene										
	0.020 ug/l	N.D.					99	106	6	48	155
3287	Pyrene										
	0.18 ug/l	N.D.					103	110	6	51	146
3288	Benzo(a)anthracene										
	0.018 ug/l	N.D.					99	106	8	52	146
3289	Chrysene										
	0.060 ug/l	N.D.					100	109	9	56	145
3290	Benzo(b)fluoranthene										
	0.035 ug/l	N.D.					100	111	10	59	141
3291	Benzo(k)fluoranthene										
	0.027 ug/l	N.D.					99	108	9	60	137
3292	Benzo(a)pyrene										
	0.022 ug/l	N.D.					98	110	11	42	158
3293	Dibenzo(a,h)anthracene										
	0.048 ug/l	N.D.					99	110	10	49	142
3294	Benzo(g,h,i)perylene										
	0.10 ug/l	N.D.					105	115	9	46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.065 ug/l	N.D.					101	111	9	64	134
-----											
8213 BTEX (8021)		Batch: 99088A51									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		113	112		1	102		81	124
0777	Toluene										
	0.2 ug/l	N.D.		110	109		0	101		84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		108	107		0	102		82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		108	107		0	103		81	120



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

See reverse side for explanation of symbols and abbreviations

2216 Rev 8/4/97





**LLI Sample No. 3117990**  
FD-03-5 Field Dup Grab Water Sample  
Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	LOW	HIGH
1861 PAH's in Water		Nitrobenz Triphenyle	22 60	131 120
8213 BTEX (8021)		TFT	77	125



Lancaster Laboratories  
2400 Lehigh Valley Blvd  
P.O. Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2661

See reverse side for explanation of symbols and abbreviations

2216 Rev 8/4/97





**LLI Sample No. WW 3115842**

Collected: 3/23/99 at 16:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

FB-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2301- SDG#: MOS07-10

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
13:03:21 D 0003 12 128410 658389  
232 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2428 West 10th and Pike  
PO Box 12428  
Tulsa, OK 74112-2428  
717-656-2300 FAX 717-656-2657





**LLI Sample No. WW 3115842**

Collected: 3/23/99 at 16:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99

Discard: 5/ 6/99

FB-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2301- SDG#: MOS07-10

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.77	ug/l
3281	Acenaphthylene	N.D.	0.77	ug/l
3282	Acenaphthene	N.D.	0.77	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	0.049 J	0.044	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	0.036 J	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.057	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	0.023 J	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.045	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.096	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.062	ug/l

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 Lexa Holland Pike  
P.O. Box 12425  
Lancaster, PA 17605-2425  
(717) 656-2300 Fax: (717) 656-2681

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/14/97





**LLI Sample No. WW 3115842**

Collected: 3/23/99 at 16:00 by JA

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

FB-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2301- SDG#: MOS07-10

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2425 New Holland Blvd  
PO Box 12425  
LA, Dist. TX 77012-0425  
717-656-2300 Fax 717-656-2661







**LLI Sample No. WW 3115842**

Collected: 03/23/99 at 16:00 by JA

Submitted: 03/24/99

FB-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
2301- SDG#: MOS07-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1	03/29/99 2355	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/26/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/26/99 1250	Jodie L. Buckwalter



Lancaster Laboratories  
1405 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2621





**LLI Sample No. 3115842**

FB-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990840015A									
-----											
3280	Naphthalene 0.77 ug/l	N.D.					86	86	0	37	120
3281	Acenaphthylene 0.77 ug/l	N.D.					88	88	0	41	135
3282	Acenaphthene 0.77 ug/l	N.D.					89	89	0	38	135
3283	Fluorene 0.16 ug/l	N.D.					92	92	0	41	140
3284	Phenanthrene 0.044 ug/l	N.D.					90	90	0	48	152
3285	Anthracene 0.030 ug/l	N.D.					87	87	0	42	143
3286	Fluoranthene 0.019 ug/l	N.D.					90	91	1	48	155
3287	Pyrene 0.17 ug/l	N.D.					96	96	0	51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.					90	91	0	52	146
3289	Chrysene 0.057 ug/l	N.D.					93	94	1	56	145
3290	Benzo(b)fluoranthene 0.034 ug/l	N.D.					93	94	1	59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.					91	92	1	60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.					92	92	0	42	158
3293	Dibenzo(a,h)anthracene 0.045 ug/l	N.D.					93	93	0	49	142
3294	Benzo(g,h,i)perylene 0.096 ug/l	N.D.					96	97	1	46	148
3295	Indeno(1,2,3-cd)pyrene 0.062 ug/l	N.D.					98	99	1	64	134
-----											
8213 BTEX (8021)		Batch: 99084A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		105	103		1	104		81	124
0777	Toluene 0.2 ug/l	N.D.		105	102		2	103		84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		103	101		2	101		82	118
0779	Total Xylenes 0.6 ug/l	N.D.		104	102		2	103		81	120



Lancaster Laboratories  
2425 West Howard Ave  
PO Box 12425  
Janesville, WI 53531-2425  
770-656-2300 Fax: 770-561-2697

See backside for explanation of symbols and abbreviations

2216 Rev 8/1/97





**LLI Sample No. 3115842**  
FB-01-5 Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	88	22	131
		Triphenyle	96	60	120
8213 BTEX (8021)		TFT	99	77	125



Lancaster Laboratories  
2425 West Holland Pike  
P.O. Box 12425  
Lancaster, PA 17605-2425  
717-656-2330 Fax 717-656-2667

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





**LLI Sample No. WW 3116847**

Collected: 3/24/99 at 16:30 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

FB-02-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FVB02 SDG#: MOS07-22FB\*

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

1 COPY TO Kerr-McGee Corporation      ATTN: Garet Van de Steeg, PhD  
 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  
 19:56:22 D 0003 12                      128410 658572  
 232 0.00 00021753 ASR000

Respectfully Submitted  
 Jenifer E. Hess, B.S.  
 Group Leader Pesticides/PCBs



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

See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





LLI Sample No. WW 3116847

Collected: 3/24/99 at 16:30 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

FB-02-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FVB02 SDG#: MOS07-22FB\*

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.76	ug/l
3281	Acenaphthylene	N.D.	0.76	ug/l
3282	Acenaphthene	N.D.	0.76	ug/l
3283	Fluorene	N.D.	0.16	ug/l
3284	Phenanthrene	N.D.	0.043	ug/l
3285	Anthracene	N.D.	0.029	ug/l
3286	Fluoranthene	N.D.	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	N.D.	0.017	ug/l
3289	Chrysene	N.D.	0.056	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.033	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.044	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.094	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.060	ug/l

Spike recoveries for Benzo(b)Fluoranthene, Benzo(k)Fluoranthene and Benzo(a)Pyrene fell outside the QC limits in the MS/MSD. This is attributed to matrix interference from the background sample. The LCS meets QC criteria, therefore the data is reported.

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Howard Blvd  
PO Box 12426  
Oklahoma City, OK 73112-0426  
Tel: (405) 656-2300 Fax: (405) 656-2651





LLI Sample No. WW 3116847

Collected: 3/24/99 at 16:30 by AS

Submitted: 3/25/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

FB-02-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FVB02 SDG#: MOS07-22FB\*

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2435 New Holland Pike  
PO Box 12422  
Lancaster, PA 17605-2425  
717-656-2300 Fax: 717-656-2697

See reverse side for explanation of symbols and abbreviations





**LLI Sample No. WW 3116847**

Collected: 03/24/99 at 16:30 by AS

Submitted: 03/25/99

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

FB-02-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FVB02 SDG#: MOS07-22FB\*

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
1861	PAH's in Water	SW-846 8310	1	03/29/99 1742	Michele D. Mack
3337	PAH Water Extraction	SW-846 3510C	1	03/27/99 0800	Ginelle L. Haines
8213	BTEX (8021)	SW-846 8021B	1	03/27/99 0214	Barry R. Shoemaker



Lancaster Laboratories  
2425 West Holland Pkwy  
PO Box 12425  
Lancaster, PA 17603-0425  
717-656-2360 Fax: 717-656-2581





**LLI Sample No. 3116847**  
 FB-02-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990850008A									
-----											
3280	Naphthalene 0.76 ug/l	N.D.		88	93	4	88			37	120
3281	Acenaphthylene 0.76 ug/l	N.D.		90	95	4	89			41	135
3282	Acenaphthene 0.76 ug/l	N.D.		90	95	4	89			38	135
3283	Fluorene 0.16 ug/l	N.D.		93	97	3	93			41	140
3284	Phenanthrene 0.043 ug/l	N.D.		86	90	3	93			48	152
3285	Anthracene 0.029 ug/l	N.D.		82	85	2	89			42	143
3286	Fluoranthene 0.019 ug/l	N.D.		52	61	8	96			48	155
3287	Pyrene 0.17 ug/l	N.D.		96	97	0	103			51	146
3288	Benzo(a)anthracene 0.017 ug/l	N.D.		66	70	3	97			52	146
3289	Chrysene 0.056 ug/l	N.D.		83	81	3	100			56	145
3290	Benzo(b)fluoranthene 0.033 ug/l	N.D.		-63	-40	17	99			59	141
3291	Benzo(k)fluoranthene 0.026 ug/l	N.D.		39	47	7	97			60	137
3292	Benzo(a)pyrene 0.021 ug/l	N.D.		-4	13	13	100			42	158
3293	Dibenzo(a,h)anthracene 0.044 ug/l	N.D.		90	92	1	100			49	142
3294	Benzo(g,h,i)perylene 0.094 ug/l	N.D.		87	91	3	105			46	148
3295	Indeno(1,2,3-cd)pyrene 0.060 ug/l	N.D.		67	74	6	104			64	134
-----											
8213 BTEX (8021)		Batch: 99085A65									
-----											
0776	Benzene 0.2 ug/l	N.D.		106	105	1	94			81	124
0777	Toluene 0.2 ug/l	N.D.		105	105	0	93			84	119
0778	Ethylbenzene 0.2 ug/l	N.D.		102	101	1	91			82	118
0779	Total Xylenes 0.6 ug/l	N.D.		103	102	1	93			81	120







**LLI Sample No. 3116847**

FB-02-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658572  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	79	22	131
		Triphenyle	97	60	120
8213 BTEX (8021)		TFT	98	77	125





LLI Sample No. WW 3117989

Collected: 3/25/99 at 10:30 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

FB-03-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FB-03 SDG#: MOS08-06FB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
8213	BTEX (8021)		See Page 3

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

ATTN: Gareth Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
22:30:01 D 0003 6 128410 658794  
050 0.00 00021753 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Park  
PO Box 17420  
Lancaster, PA 17608-0420  
717-656-2300 Fax 717-656-2681





**LLI Sample No. WW 3117989**

Collected: 3/25/99 at 10:30 by AS

Submitted: 3/26/99 Reported: 4/ 8/99  
Discard: 5/ 9/99

FB-03-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FB-03 SDG#: MOS08-06FB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.78	ug/l
3281	Acenaphthylene	N.D.	0.78	ug/l
3282	Acenaphthene	N.D.	0.78	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.045	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.058	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.046	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.097	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.063	ug/l

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

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

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17602-2425  
(717) 656-2300 Fax (717) 656-2651





LLI Sample No. WW 3117989

Collected: 3/25/99 at 10:30 by AS

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

FB-03-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
 FB-03 SDG#: MOS08-06FB

Account No: 07802  
 Kerr-McGee Corporation  
 P.O. Box 25861  
 Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
 Re1.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
 Michele Turner, B.A.  
 Manager, Volatiles



Lancaster Laboratories  
 1425 New Holland Pike  
 P.O. Box 12425  
 Lancaster, PA 17602-2425  
 717-656-2300 Fax: 717-656-2305





**LLI Sample No. WW 3117989**

Collected: 03/25/99 at 10:30 by AS

Submitted: 03/26/99

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

FB-03-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI  
FB-03 SDG#: MOS08-06FB

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
1861	PAH's in Water	SW-846 8310	1	04/06/99 1543	Michelle J. Kolodziejski
3337	PAH Water Extraction	SW-846 3510C	2	04/01/99 1800	Wanda F. Oswald
8213	BTEX (8021)	SW-846 8021B	1	03/30/99 2034	Gordon A. Lodde



Lancaster Laboratories  
2400 Lincoln Blvd  
Lancaster, PA 17605-2425  
Tel: 717-650-2200 Fax: 717-650-2081





**LLI Sample No. 3117989**  
 FB-03-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
1861 PAH's in Water		Batch: 990910006A									
-----											
3280	Naphthalene										
	0.78 ug/l	N.D.					93	95	2	37	120
3281	Acenaphthylene										
	0.78 ug/l	N.D.					98	99	1	41	135
3282	Acenaphthene										
	0.78 ug/l	N.D.					96	99	3	38	135
3283	Fluorene										
	0.17 ug/l	N.D.					100	103	3	41	140
3284	Phenanthrene										
	0.045 ug/l	N.D.					99	103	4	48	152
3285	Anthracene										
	0.030 ug/l	N.D.					92	97	5	42	143
3286	Fluoranthene										
	0.020 ug/l	N.D.					99	106	6	48	155
3287	Pyrene										
	0.18 ug/l	N.D.					103	110	6	51	146
3288	Benzo(a)anthracene										
	0.018 ug/l	N.D.					99	106	8	52	146
3289	Chrysene										
	0.058 ug/l	N.D.					100	109	9	56	145
3290	Benzo(b)fluoranthene										
	0.034 ug/l	N.D.					100	111	10	59	141
3291	Benzo(k)fluoranthene										
	0.026 ug/l	N.D.					99	108	9	60	137
3292	Benzo(a)pyrene										
	0.022 ug/l	N.D.					98	110	11	42	158
3293	Dibenzo(a,h)anthracene										
	0.046 ug/l	N.D.					99	110	10	49	142
3294	Benzo(g,h,i)perylene										
	0.097 ug/l	N.D.					105	115	9	46	148
3295	Indeno(1,2,3-cd)pyrene										
	0.063 ug/l	N.D.					101	111	9	64	134
-----											
8213 BTEX (8021)		Batch: 99088A51									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		113	112		1	102		81	124
0777	Toluene										
	0.2 ug/l	N.D.		110	109		0	101		84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		108	107		0	102		82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		108	107		0	103		81	120



Lancaster Laboratories  
 2425 New Holland Blvd  
 PO Box 12425  
 Lancaster, PA 17605-2425  
 717-696-2300 Fax: 717-656-2661





**LLI Sample No. 3117989**  
FB-03-5 Field Blank Grab Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
1861 PAH's in Water		Nitrobenz	93	22	131
		Triphenyle	102	60	120
8213 BTEX (8021)		TFT	99	77	125





LLI Sample No. WW 3115844  
Collected:

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

Trip Blank #1 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
23TB- SDG#: MOS07-12TB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
8213	BTEX (8021)		See Page 2

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
13:05:31 D 0003 12 128410 658389  
232 0.00 00005933 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17609-4425  
717-656-2300 Fax 717-656-2600







LLI Sample No. WW 3115844

Collected:

Submitted: 3/24/99 Reported: 4/ 5/99  
Discard: 5/ 6/99

Trip Blank #1 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
23TB- SDG#: MOS07-12TB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
1401 West Franklin Ave  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax 717-656-2681



&&&



LLI Sample No. WW 3115844

Collected:

Submitted: 03/24/99

Trip Blank #1 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
23TB- SDG#: MOS07-12TB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
8213	BTEX (8021)	SW-846 8021B	1	03/25/99 1934	Jodie L. Buckwalter



Lancaster Laboratories  
2425 New Holland Pike  
PO Box 12416  
Lancaster, PA 17619-1421  
717-656-2300 FAX 717-656-2301





**LLI Sample No. 3115844**

Trip Blank #1 Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
8213 BTEX (8021)		Batch: 99084A65									
0776	Benzene										
	0.2 ug/l	N.D.		105	103	1	104			81	124
0777	Toluene										
	0.2 ug/l	N.D.		105	102	2	103			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		103	101	2	101			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		104	102	2	103			81	120





LLI Sample No. 3115844

Trip Blank #1 Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658389  
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
8213 BTEX (8021)	TFT		96	77 125



Lancaster Laboratories  
2401 East Hennepin Ave.  
Milwaukee, WI 53217  
Tel: 414-224-2300 Fax: 414-224-2301

For reverse side for explanation of symbols and abbreviations

2216 Rev. 5/01/00





**LLI Sample No. WW 3116849**

Collected: 3/24/99 by AS

Submitted: 3/25/99 Reported: 4/ 6/99  
Discard: 5/ 7/99

Trip Blank #2 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
TB02- SDG#: MOS08-02TB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
8213	BTEX (8021)		See Page 2

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
10:24:35 D 0003 2 128410 658573  
232 0.00 00005933 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 Newland Park  
PO Box 10426  
Lancaster, PA 17603-2425  
717-656-2300 Fax 717-656-2657





## Lancaster Laboratories

A division of Thermo Analytical Inc.

**LLI Sample No. WW 3116849**

Collected: 3/24/99 by AS

Submitted: 3/25/99 Reported: 4/ 6/99  
Discard: 5/ 7/99

Trip Blank #2 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
TB02- SDG#: MOS08-02TB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
840 Queen of the South Pike  
P.O. Box 12425  
Lancaster, PA 17605-2425  
Tel: 717-656-2300 Fax: 717-656-2621





**LLI Sample No. WW 3116849**  
Collected: 03/24/99 by AS

Submitted: 03/25/99

Trip Blank #2 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
TB02- SDG#: MOS08-02TB

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS		ANALYST
				DATE	AND TIME	
8213	BTEX (8021)	SW-846 8021B	1	03/26/99	1956	Barry R. Shoemaker



Lancaster Laboratories  
2425 New Hope Road  
PO Box 12428  
Lancaster, PA 17605-0428  
717-656-2300 Fax 717-656-2447





**LLI Sample No. 3116849**

Trip Blank #2 Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658573  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH	
-----		Batch: 99085A65										
0776	Benzene											
	0.2 ug/l	N.D.		106	105	1	94			81	124	
0777	Toluene											
	0.2 ug/l	N.D.		105	105	0	93			84	119	
0778	Ethylbenzene											
	0.2 ug/l	N.D.		102	101	1	91			82	118	
0779	Total Xylenes											
	0.6 ug/l	N.D.		103	102	1	93			81	120	







**LLI Sample No. 3116849**

Trip Blank #2 Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658573  
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
8213 BTEX (8021)	TFT	96	77	125



Lancaster Laboratories  
2425 West Howard Ave  
PO Box 12423  
Lancaster, PA 17602-1423  
717-656-2360 Fax 717-656-2007

For more information, visit our website at [www.lancasterlab.com](http://www.lancasterlab.com)

2216 Rev. 6/07





Lancaster Laboratories  
A division of Thermo Analytical Inc.

LLI Sample No. WW 3117991  
Collected: 3/17/99

Submitted: 3/26/99 Reported: 4/ 8/99  
Discard: 5/ 9/99

Trip Blank#3 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
317TB SDG#: MOS08-08TB\*

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
8213	BTEX (8021)			See Page 2

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

ATTN: Garet Van de Steeg, PhD  
ATTN: Mr. Tom Graan

Questions? Contact your Client Services Representative  
Kay G. Hower at (717) 656-2300  
22:31:31 D 0003 6 128410 658794  
050 0.00 00005933 ASR000

Respectfully Submitted  
Jenifer E. Hess, B.S.  
Group Leader Pesticides/PCBs



Lancaster Laboratories  
2425 New Hope Road  
PO Box 12425  
Lancaster, PA 17606-2425  
717-656-2300 Fax 717-656-2557





LLI Sample No. WW 3117991

Collected: 3/17/99

Submitted: 3/26/99 Reported: 4/ 8/99

Discard: 5/ 9/99

Trip Blank#3 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
317TB SDG#: MOS08-08TB\*

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

P.O. MOSS-AMERICAN  
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
BTEX (8021)				
0776	Benzene	N.D.	0.2	ug/l
0777	Toluene	N.D.	0.2	ug/l
0778	Ethylbenzene	N.D.	0.2	ug/l
0779	Total Xylenes	N.D.	0.6	ug/l

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

Respectfully Submitted  
Michele Turner, B.A.  
Manager, Volatiles



Lancaster Laboratories  
2407 Lee Memorial Pkwy  
PO Box 12420  
Lancaster, PA 17403-2425  
TEL: 656-2300 FAX: 717-656-2688

See reverse side for explanation of symbols and abbreviations





LLI Sample No. WW 3117991

Collected: 03/17/99

Submitted: 03/26/99

Account No: 07802  
Kerr-McGee Corporation  
P.O. Box 25861  
Oklahoma City OK 73125

Trip Blank#3 Water Sample

Moss-American Superfund Site - Milwaukee, WI  
317TB SDG#: MOS08-08TB\*

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
8213	BTEX (8021)	SW-846 8021B	1	03/31/99 0027	Gordon A. Lodde



Lancaster Laboratories  
2425 West Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2500 Fax 717-656-2507





LLI Sample No. **3117991**

Trip Blank#3 Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----											
8213 BTEX (8021)		Batch: 99088A51									
-----											
0776	Benzene										
	0.2 ug/l	N.D.		113	112	1	102			81	124
0777	Toluene										
	0.2 ug/l	N.D.		110	109	0	101			84	119
0778	Ethylbenzene										
	0.2 ug/l	N.D.		108	107	0	102			82	118
0779	Total Xylenes										
	0.6 ug/l	N.D.		108	107	0	103			81	120



Lancaster Laboratories  
2475 Newland Road, P.O. Box 12425  
Milwaukee, WI 53212-4425  
Tel: 414-656-2370 Fax: 414-656-2681





LLI Sample No. 3117991  
Trip Blank#3 Water Sample

Moss-American Superfund Site - Milwaukee, WI

Group No. 658794  
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
8213 BTEX (8021)	TFT	97	77	125



Lancaster Laboratories  
2405 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-650-2000 Fax 717-650-2057



# Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only  
 Acct. # 7002 Sample # 3116836-47

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

Client: <u>Kevv - McGee</u> Acct. #: _____ Project Name/#: <u>Moss American Site</u> PWSID #: _____ Project Manager: <u>Tom Graan</u> P.O.# _____ Sampler: <u>Jameel/Angela Strong</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>				Matrix <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">4</span> <input type="checkbox"/> Potable (Check if applicable) <input type="checkbox"/> NPDES <input type="checkbox"/> Other			Analyses Requested <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">5</span> <div style="text-align: center; font-size: 2em; font-weight: bold;">BTEX PAHs 8310</div>						For lab use only FSC: _____ SCR #: _____				
Sample Identification	Date Collected	Time Collected	Grab <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">3</span>	Composite	Soil	Water	Other	Total # of Containers	Remarks						Temperature of samples upon receipt (if requested) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">6</span>		
MW-TI-5	3/24/99	1000	✓			✓		4	✓	✓							
MW-285-5		1110	✓			✓		12	✓	✓							
MW-135-5		1215	✓				✓	4	✓	✓							
MW-255-5		1335	✓				✓	4	✓	✓							
MW-265-5		1410	✓				✓	4	✓	✓							
MW-35-5		1435	✓				✓	4	✓	✓							
MW-32-5		1500	✓				✓	4	✓	✓							
MW-45-5		1540	✓				✓	4	✓	✓							
MW-41-5		1600	✓				✓	4	✓	✓							
FB-02-5		1630	✓				✓	4	✓	✓							

Turnaround Time Requested (TAT) (please circle): <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Normal</span> 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 <input type="checkbox"/> Fax <input type="checkbox"/> Phone # <u>(847) 918-4000</u> Fax # <u>(847) 918-4055</u>		Relinquished by: <u>Jameel</u> Date: <u>3/24/99</u> Time: <u>1840</u>		Received by: _____ Date: _____ Time: _____	
Data Package Options (please circle if requested) QC Summary Type VI (Raw Data) <u>As per Quin</u> Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP)		SDG Complete? Yes <input type="checkbox"/> No <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">No</span> 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: _____ Received by: _____ Date: _____ Time: _____	
Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____		Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____			

# Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only  
 Acct. # 9802 Sample # 3116048-49

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

Client: <u>Kerr-McGee</u> Acct. #: _____ Project Name/#: <u>Moss-American Site</u> PWSID #: _____ Project Manager: <u>Tom Graun</u> P.O.# _____ Sampler: <u>Jameel/Angela Strong</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>			Matrix <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">4</span> <input type="checkbox"/> Potable (Check if applicable) <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other			Analyses Requested <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">5</span> <div style="text-align: center; font-size: 2em; font-weight: bold; transform: rotate(-45deg);">                     BTEX PAHs 8310                 </div>					For lab use only FSC: _____ SCR #: _____					
Sample Identification	Date Collected	Time Collected	Grab <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">3</span>	Composite	Soil	Water	Other	Total # of Containers	Remarks					Temperature of samples upon receipt (if requested) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">6</span>		
FD-02-5	3/24/99	-	✓			✓		4	✓	✓						
Trip Blank #2	3/17/99	-	✓			✓		2	✓							

Turnaround Time Requested (TAT) (please circle): <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Normal</span> 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) 918-4060</u> Fax # <u>(847) 918-4055</u>	Relinquished by: <u>Jameel</u> Date: <u>3/24/99</u> Time: <u>1840</u> Received by: _____ Date: _____ Time: _____	Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____
Data Package Options (please circle if requested) QC Summary Type VI (Raw Data) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">As per Quote</span> Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP)	SDG Complete? Yes <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">No</span> 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: _____ Received by: _____ Date: _____ Time: _____
	Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____	Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____



# Analysis Request / Environmental Services Chain of Custody



For Lancaster Laboratories use only  
 Acct. # 7962 Sample # 3117986-91

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

Client: <u>Kerr-McLee</u> Acct. #: _____ Project Name/#: <u>Moss-American Site</u> PWSID #: _____ Project Manager: <u>Tom Graam</u> P.O.# _____ Sampler: <u>Jamuel/ Angela Strong</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>				Matrix <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">4</span> <input type="checkbox"/> Potable (check if applicable) <input type="checkbox"/> NPDES Soil _____ Water _____ Other _____		Analyses Requested <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">5</span> <div style="text-align: center; font-size: 2em; font-weight: bold;">BTEX PAHs S10</div>						For lab use only FSC: _____ SCR #: _____		
Sample Identification	Date Collected	Time Collected	Grab <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">3</span>	Composite	Soil	Water	Other	Total # of Containers	Remarks <span style="float: right; font-size: 0.8em;">Temperature of samples upon receipt (if requested) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">6</span></span>					
MW-55-5	3/25/99	810	/			/		4						
MW-205-5		900	/			/		4						
MW-81-5		1015	/			/		4						
FB-03-5		1030	/			/		4						
FD-03-5		-	/			/		4						
Trip Blank #3	3/17/99		/			/		2						

Turnaround Time Requested (TAT) (please circle): <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Normal</span> 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) 218-4000</u> Fax #: <u>(847) 918-4055</u>		Relinquished by: <u>Jamuel</u> Date: <u>3/25/99</u> Time: <u>1400</u> Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____	
Data Package Options (please circle if requested) QC Summary Type VI (Raw Data) <u>As per QM</u> Type I (Tier I) GLP Type II (Tier II) Other Type III (NJ Red. Del.) Type IV (CLP)		SDG Complete? <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Yes</span> No Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.) Internal Chain of Custody required? Yes No		Received by: <u>Deo Zook</u> Date: <u>3/26/99</u> Time: <u>0900</u>	

# Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 7802 Sample # 3115833-844

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

Client: <u>Kerr-McGee</u> Acct. #: _____ Project Name/#: <u>Moss-American Site</u> PWSID #: _____ Project Manager: <u>Tom Givan</u> P.O.# _____ Sampler: <u>Jameel Ahmed/Angela Strong</u> Quote #: _____ Name of state where samples were collected: <u>WISCONSIN</u>				Matrix <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">4</span> <input type="checkbox"/> Potable (Check if applicable) <input type="checkbox"/> NPDES <input type="checkbox"/> Other		Analyses Requested <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">5</span> <div style="text-align: center; font-size: 2em; font-weight: bold;">BTEX PAHs 8310</div>				For lab use only FSC: _____ SCR #: <u>1123767</u>							
Sample Identification	Date Collected	Time Collected	Grab <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">3</span>	Composite	Soil	Water	Other	Total # of Containers					Remarks				
MW-105-5	3/23/99	0835	✓			✓		4	✓	✓					Custody Seal #'s		
MW-95-5		0920	✓			✓		4	✓	✓					45490		
MW-9I-5		0950	✓			✓		4	✓	✓					45491		
MW-295-5		1100	✓			✓		4	✓	✓					45489		
<del>MAW</del> -TW-05-5		1215	✓			✓		4	✓	✓							
MW-65-5		1220	✓			✓		4	✓	✓							
MW-275-5		1250	✓			✓		4	✓	✓							
MW-205-5		1500	✓			✓		4	✓	✓							
TW-09-5		1545	✓			✓		4	✓	✓							
FB-01-5	1600	✓			✓		4	✓	✓								

Turnaround Time Requested (TAT) (please circle): <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Normal</span> 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 <input type="checkbox"/> Fax <input type="checkbox"/> Phone #: <u>(847) 918-4142</u> Fax #: <u>(847) 918-4055</u>		Relinquished by: <u>Jameel</u> Date: <u>3-10-99</u> Time: <u>16:10</u>		Received by: <u>Jameel</u> Date: <u>3/19/99</u> Time: <u>1030</u>	
Relinquished by: <u>Jameel</u> Date: <u>3/23/99</u> Time: <u>1900</u>		Received by: _____ Date: _____ Time: _____			
Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____			
Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____			

Data Package Options (please circle if requested)		SDG Complete? Yes <input type="checkbox"/> No <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">No</span>
Type VI (Raw Data) <u>Aspergite</u>	GLP	Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.)  Internal Chain of Custody required? Yes No
Type I (Tier I)	Other	
Type II (Tier II)		
Type III (NJ Red. Del.)		
Type IV (CLP)		

# Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only  
 Acct. # 7802 Sample # 3115833-844

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

Client: <u>Kerr - McGee</u> Project Name #: <u>Moss-American Site</u> Project Manager: <u>Tom Graan</u> Sampler: <u>Jameel Ahmed/Angela Strong</u> Name of state where samples were collected: <u>WISCONSIN</u>	Acct. #: _____ PWSID #: _____ P.O.# _____ Quote #: _____	Matrix <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">4</span> <input type="checkbox"/> Potable (check if applicable) <input type="checkbox"/> NPDES Other _____	Total # of Containers <u>BTEX</u> <u>PAHs 8310</u>	Analyses Requested (This area is currently blank with diagonal lines)	For lab use only FSC: _____ SCR #: <u>1123767</u> Temperature of samples upon receipt (if requested) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">6</span>
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Sample Identification	Date Collected	Time Collected	Grab <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">3</span>	Composite	Soil	Water	Other	Total # of Containers	Remarks	Temperature of samples upon receipt (if requested) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">6</span>
<u>FD-01-5</u>	<u>3/23/99</u>	<u>-</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>4</u>	<u>✓</u>	
<u>Trip Blank #1</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>2</u>	<u>✓</u>	

Turnaround Time Requested (TAT) (please circle): <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Normal</span> 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 <u>847-918-4142</u> Fax <u>847-918-4055</u>	Relinquished by: <u>Jameel</u> Date <u>3/17/99</u> Time <u>16:10</u> Relinquished by: <u>Jameel</u> Date <u>3/23/99</u> Time <u>19:00</u> Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____	Received by: <u>Jameel</u> Date <u>3/19/99</u> Time <u>10:20</u> Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____	SDG Complete? Yes <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">No</span> Site-specific QC required? Yes No (If yes, indicate QC sample and submit triplicate volume.) Internal Chain of Custody required? Yes No
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