Received
09/07/05

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30 August 2005

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

RFW Work Order No. 02687.007.007
KMC Work Order No. 40-50-01-AKW-V

Re: 2nd Quarter 2005 Groundwater Monitoring Report
Moss-American Site, Milwaukee, WI

Dear Mr. Hart:

Enclosed is the groundwater monitoring report for the 2nd quarter of 2005. Should you have any questions or comments, please contact me at (847) 918-4142 or Keith Watson at (405) 270-3747.

Very truly yours,

WESTON SOLUTIONS, INC.

Thomas P. Graan

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

TPG\tg

cc: T. Wentland, WDNR
K. Watson, KMC

QUARTERLY GROUNDWATER TREATMENT PERFORMANCE MONITORING REPORT Q2 2005 MOSS-AMERICAN SITE MILWAUKEE, WISCONSIN

Prepared for

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August 2005

W. O. No. 02687.007.007.0001

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SECTION 1
INTRODUCTION

In accordance with paragraph 4a of the Remedial Design/Remedial Action Statement of Work (RD/RA SOW), Kerr-McGee Chemical, LLC (KMC) is required to implement a groundwater monitoring program capable of detecting changes in chemical concentrations in the groundwater. KMC has directed Weston Solutions, Inc. (WESTON®) to perform this work. As previously agreed, the monitoring network currently includes seven shallow groundwater monitoring wells (MW-5S, MW-6S, MW-7S, MW-9S, MW-27S, MW-28S, and MW-29S). Additionally, the quarterly groundwater monitoring program includes sampling of the eight containment performance monitoring wells (MW-30S, MW-31S, MW-32S, MW-33S, MW-34S, MW-35S, MW-36S and MW-37S), which are screened in the shallow groundwater-bearing unit underlying the site. Nine piezometer wells (PZ-01, PZ-02, PZ-03, PZ-04, PZ-05, PZ-06, PZ-07, PZ-09, and PZ-10) and one staff gauge (SG-01) were installed in December 2002 to monitor groundwater movement. The locations of piezometers, the staff gauge, and the groundwater-monitoring wells that are included in the quarterly sampling program are indicated on Figure 1-1.

In addition to the on-site groundwater monitoring wells, four shallow groundwater monitoring wells (MW-A, MW-B, MW-C and MW-D) were installed in September 2003 to monitor groundwater conditions between old and new river channels in the Reach 1. These four wells are sampled annually (during Q3 sampling events) in accordance with the annual groundwater monitoring program for the Reach 1 area.

In December 2004, seven additional shallow groundwater monitoring wells (MW-E, MW-F, MW-G, MW-H, MW-I, MW-J and MW-K) were installed to monitor groundwater conditions between old and new river channels in the Reaches 2 and 3. These seven wells will be sampled annually (during Q3 sampling events) in accordance with the annual groundwater monitoring program for the Reaches 2 and 3.

Some wells that were previously part of the groundwater-monitoring network have been removed to facilitate soil remediation activities. TW-09, MW-8S, and MW-8I were removed during excavation activities and installation of the funnel-and-gate groundwater treatment system in 1999. Wells MW-4S and MW-4I were removed during early Q3 2001, and well TW-05 was removed in early Q4 2001 during the "hot spot" soil excavation and treatment process. Wells MW-20S and MW-20I were removed during Q3 2002 when the Little Menomonee River (LMR) diversion work took place.

As discussed in the Q2 2002 Quarterly Groundwater Treatment Performance Monitoring Report, some modifications were made to the sampling program. The first modification was the reduction of performance monitoring well sampling frequency. The treatment performance monitoring wells were originally sampled on a monthly basis, but sample data showed that minimal changes in site conditions were found on a monthly basis. Therefore a change in sampling frequency from monthly to quarterly was recommended. This recommendation was approved by the Wisconsin Department of Natural Resources (WDNR) and the United States Environmental Protection Agency (collectively "Agencies") and the monthly sampling program was discontinued after the October 2002 sampling event. The second modification was the reduction of the groundwater monitoring program scope. It was proposed that some shallow monitoring wells (MW-3S, MW-10S, MW-13S, MW-25S, MW-26S, and MW-20S) and intermediate monitoring wells (MW-3I, MW-7I, MW-9I, and MW-20I) be removed from the groundwater monitoring program due to zero or few sample detections in these wells. The Agencies approved this recommendation, and the sampling of these wells was discontinued after the September (Q3) 2002 sampling event; however, per the Agencies' request, these wells were not abandoned, with the exception of MW-20S and MW-20I abandoned during LMR diversion. Instead these wells are utilized to collect water level measurements for the production of more accurate quarterly groundwater potentiometric maps.

The Quality Assurance Project Plan for Installation of Groundwater Remedial System (QAPP) (WESTON, October 1999) requires KMC to implement a groundwater monitoring program capable of indicating groundwater chemistry before, during, and after treatment. In addition, the hydraulic gradient is calculated at each treatment gate and is used to estimate groundwater flow

velocity through the treatment gate remediation system. The monitoring network includes six groundwater treatment gates (TG1 through TG6) with three treatment performance monitoring wells located at each groundwater treatment gate. The treatment performance monitoring wells include TG1-1, TG1-2, TG1-3, TG2-1, TG2-2, TG2-3, TG3-1, TG3-2, TG3-3, TG4-1, TG4-2, TG4-3, TG5-1, TG5-2, TG5-3, TG6-1, TG6-2, and TG6-3, and the locations are indicated on Figure 1-1.

In accordance with paragraph 4a (i) of the RD/RA SOW, the quarterly field measurement and analysis of groundwater samples collected from the shallow and containment performance groundwater monitoring wells include groundwater elevation, pH, temperature, turbidity, specific conductance, oxidation-reduction (redox) potential, and dissolved oxygen (DO). Required laboratory analyses include benzene, toluene, ethylbenzene, and xylene (BTEX collectively) and the following polynuclear aromatic hydrocarbon (PAH) compounds: acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluorene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene.

In accordance with Addendum No. 1 to the QAPP (WESTON, May 2001), the quarterly field measurements for samples collected from the treatment performance monitoring wells include groundwater elevation, pH, temperature, turbidity, specific conductance, redox potential, and DO. Quarterly laboratory analyses required for the treatment performance wells include microbial enumeration, nitrate-nitrogen (NO_3-N), nitrite-nitrogen (NO_2-N), total Kjeldahl nitrogen (TKN), ammonia-nitrogen (NH_3-N), total phosphate-phosphorous (PO_4-P), orthophosphate (ORP), biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), BTEX, and the PAHs indicated in the above paragraph.

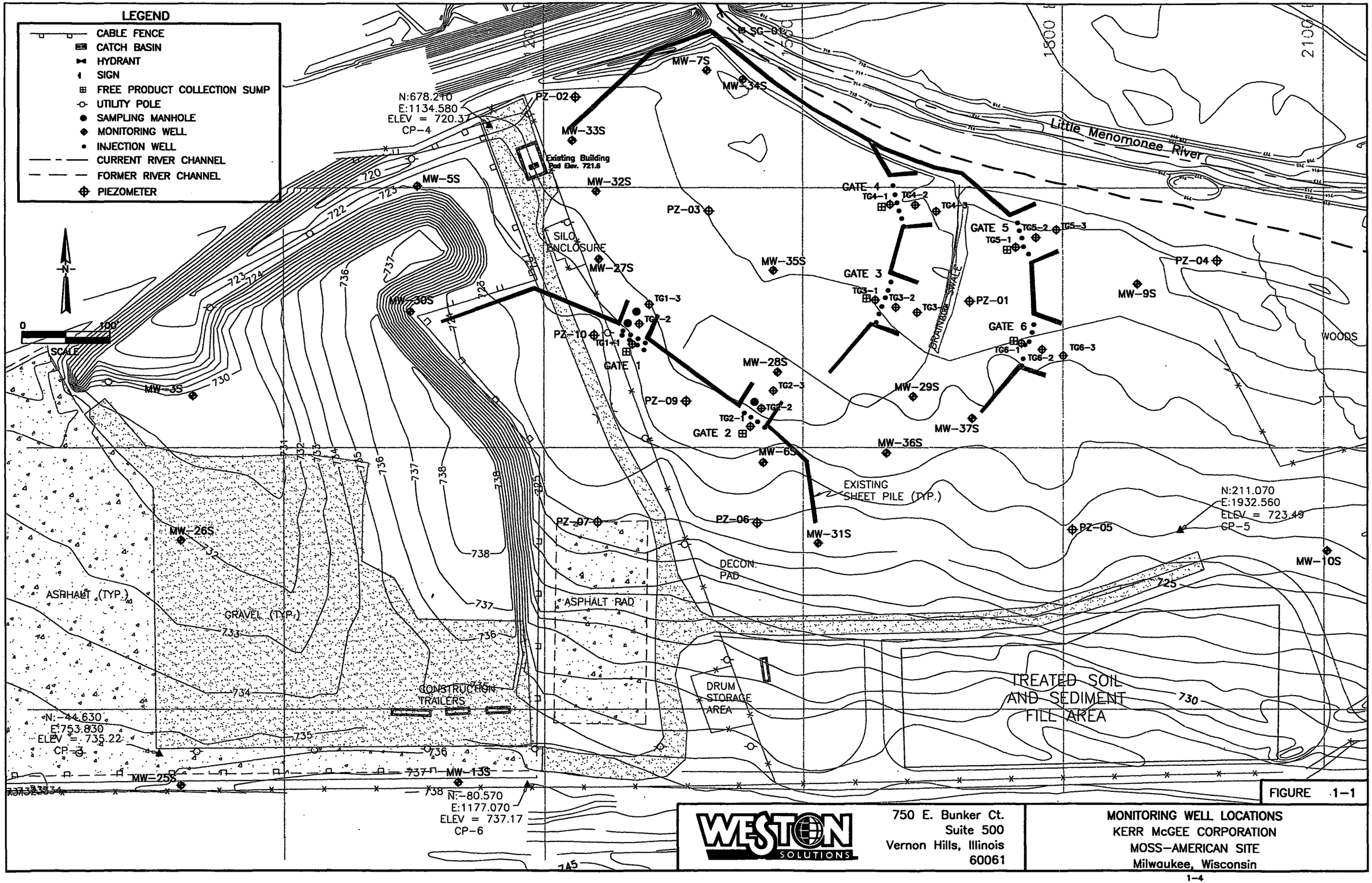

FIGURE 1-1

WESTON SOLUTIONS

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60061

MONITORING WELL LOCATIONS
KERR McGEE CORPORATION
MOSS-AMERICAN SITE
Milwaukee, Wisconsin

SECTION 2
ON-SITE GROUNDWATER MONITORING RESULTS

The Q2 2005 groundwater-monitoring event at the Moss-American site was completed between 20 and 23 June 2005. Tasks completed during the field effort for this event included the collection of groundwater elevation and DO data from the shallow groundwater monitoring, containment performance monitoring, and treatment performance monitoring wells referenced in Section 1. Following groundwater elevation and DO measurements, groundwater samples were collected from all the shallow, containment performance, and treatment performance groundwater monitoring wells. The results of the Q2 2005 groundwater sampling event are described in the following subsections.

2.1 GROUNDWATER ELEVATION MEASUREMENTS

The depth to water was measured in each of the shallow groundwater monitoring, containment performance monitoring, treatment performance monitoring wells, and piezometers on 20 June 2005, and prior to the commencement of groundwater sampling. These measurements were used to determine the elevation of the potentiometric surface within the shallow groundwater-bearing zone underlying the site. The water level measurements for the shallow groundwater monitoring and containment performance monitoring wells and calculated elevations are presented in Table 2-1. The groundwater level measurements and corresponding groundwater elevations, calculated hydraulic gradients across the treatment gates, and estimated groundwater flow velocities through the treatment gates are presented in Table 2-2. The groundwater levels for the piezometers are presented in Table 2-3. The staff gauge was damaged between the Q1 and Q2 2005 sampling events and could not be accurately measured. Figure 2-1 presents a potentiometric surface map of the shallow groundwater-bearing zone, based on the 20 June 2005 data. Figure 2-2 presents the groundwater potentiometric surface elevations during Q1 2005. An evaluation of the Q2 2005 potentiometric surface map is presented below.

As shown in Figure 2-1, the groundwater within the shallow groundwater-bearing zone generally flows northeastward toward the LMR. In the topographically higher (western) portion of the site,

the horizontal hydraulic gradient is relatively steep, at approximately 0.034 feet per foot (ft/ft) to the northeast, as measured from the vicinity of MW-13S to PZ-07. The topography of the site levels out near the river, as does the potentiometric surface with a northerly hydraulic gradient of approximately 0.019 ft/ft, as measured from the vicinity of PZ-05 to MW-9S. The estimated hydraulic gradients within the treatment gates ranged from 0.0003 to 0.0158 ft/ft (Table 2-2). The hydraulic gradient is relatively flat within the treatment gate area with an overall hydraulic gradient from TG1 to TG5 of approximately 0.0017 ft/ft in an easterly direction.

The average velocity of groundwater flow within the shallow water-bearing zone can be calculated using the following equation:

$$v = Ki/n$$

where:

v = groundwater velocity
K = hydraulic conductivity (also referred to as the coefficient of permeability)
i = hydraulic gradient
n = porosity

Based on slug tests performed on wells installed during the remedial investigation (RI), the hydraulic conductivity of the deposits located on the topographically higher, western portion of the site were in the range of 1×10^{-5} to 1×10^{-6} centimeters per second (cm/s) (0.03 to 0.003 feet per day [ft/day]). Based on laboratory-performed hydraulic conductivity analyses conducted on material used to backfill areas of the site located along the LMR, the hydraulic conductivity of soils located in the topographically lower portion of the site within the funnel-and-gate remedial system is approximately 1×10^{-3} cm/s (3 ft/day). Using a hydraulic gradient of 0.034 ft/ft, an assumed effective porosity of 0.3, and a hydraulic conductivity of 0.03 ft/day, the groundwater flow velocity in the western portion of the site is calculated to be approximately 0.0034 ft/day. Near the river, using a hydraulic gradient of 0.019 ft/ft, a porosity of 0.3, and a hydraulic conductivity of 3 ft/day, the velocity of groundwater flow is calculated to be approximately 0.19 ft/day. The groundwater flow velocities within the treatment gates are estimated to range from 0.0028 ft/day to 0.1493 ft/day. The groundwater flow velocity through each treatment gate is

presented in Table 2-2.

2.2 GROUNDWATER SAMPLE ANALYTICAL RESULTS

Groundwater samples were collected from a total of 33 shallow monitoring wells screened within the shallow groundwater-bearing unit. The shallow wells sampled include seven shallow groundwater monitoring wells (MW-5S, MW-6S, MW-7S, MW-9S, MW-27S, MW-28S, and MW-29S); eight containment performance monitoring wells (MW-30S, MW-31S, MW-32S, MW-33S, MW-34S, MW-35S, MW-36S and MW-37S); and eighteen treatment performance monitoring wells (TG1-1, TG1-2, TG1-3, TG2-1, TG2-2, TG2-3, TG3-1, TG3-2, TG3-3, TG4-1, TG4-2, TG4-3, TG5-1, TG5-2, TG5-3, TG6-1, TG6-2, and TG6-3).

In addition to the investigative groundwater samples collected, three field sample duplicate, two matrix spike/matrix spike duplicate (MS/MSD), and four field blank (identified by an FB prefix) samples were collected for quality assurance/quality control (QA/QC) purposes. Trip blanks accompanied each cooler of sample containers from the laboratory to the site and were shipped back to the laboratory within each cooler containing volatile organic compound (VOC) samples.

All groundwater samples were field screened and laboratory analyzed for the parameters indicated in Section 1.

2.2.1 Field-Measured Parameters

The groundwater samples were measured in the field for pH, specific conductance, temperature, redox potential, DO, and turbidity. The field parameters were collected using a YSI 556 portable water quality meter and a HS Scientific DRT-15CE turbidimeter. Downhole DO readings were collected from monitoring wells prior to purging the well for groundwater sample collection. The groundwater pH, redox potential, specific conductance, temperature, and turbidity were monitored during well purging prior to sampling. The final (stabilized) values for these measurements prior to sample collection are presented in Table 2-4. Water quality parameter

measurements were not collected from well TG1-1 and MW-34S due to the presence of sheen on the purge water during Q2 2005.

2.2.1.1 pH

The pH of the groundwater samples collected during Q2 2005 ranged from 6.47 to 7.25 pH standard units (S.U.). pH is an important factor in determining the feasibility of bioremediation of contaminants in the site groundwater because biological systems typically function only in narrow pH ranges (typically 6.5 to 8.5 S.U.), and because microbial growth rates are pH dependent.

2.2.1.2 Redox Potential

The redox potentials of the groundwater samples collected at the site during Q2 2005 ranged from -126.4 to 82.4 millivolts (mV). Redox potential indicates the capability of the groundwater to promote chemical oxidation-reduction processes that consume organic matter and ultimately oxidize organic compounds. Microorganisms typically act as catalysts in oxidation reactions, and as such, the redox potential indicates the potential for the groundwater to oxidize the contaminants present.

Since environmental systems are typically not in equilibrium, the redox potential is used as a gross indicator of the state of oxidation-reduction in the system. Oxidation-reduction rates in the system are greater as the redox potential increases in magnitude. A positive redox potential typically indicates conditions where oxidized ionic species (i.e., NO_3^-, SO_4^{2-}, and Fe^{3+}) predominate in comparison to their reduced counterparts (NH_4^+, S^{2-}, and Fe^{2+}, respectively). Once DO is removed from water (i.e., via biodegradation of organics), oxidized ionic species become electron acceptors in redox processes. As the processes continue under anaerobic conditions, the reduced ionic species concentration increases, resulting in an overall decrease of the water's oxidation potential.

2.2.1.3 Dissolved Oxygen

DO levels for the groundwater samples collected during Q2 2005 ranged from 0.02 to 0.88 milligrams per liter (mg/L). Overall, the DO readings indicate the presence of low levels of oxygen in the water, and the system as a whole is considered to be generally under suboxic conditions. DO promotes the growth of aerobic and facultative bacteria and the production of readily assimilated nutrients. All of these factors are required to facilitate the oxidation reaction responsible for removing the contaminants from the groundwater under aerobic conditions.

2.2.1.4 Specific Conductance

The specific conductance, or conductivity, of the groundwater samples collected during Q2 2005 ranged from 0.655 to 2.301 millimhos per centimeter (mmho/cm). Conductivity of water is a measure of the ability of the solution to carry an electrical current that is transported by ions in the solution; therefore, conductivity is used as an indicator of the total dissolved solids (TDS) present in a water sample. As the dissolved solids content of a solution increases, the capacity for the water to transmit electrical current increases. Although conductivity is a measure of the aggregate dissolved solids in the water it may be correlated to the readily available nutrient levels in the water, since TDS includes nitrate, nitrite, ammonium, and phosphate ions.

2.2.1.5 Temperature

Groundwater temperatures ranged from 12.7 to 15.68 degrees Celsius (°C) during Q2 2005. Temperature is an extremely important factor in bioremediation because microbial growth rates are greatly dependent upon temperature.

2.2.1.6 Turbidity

Turbidity ranged from 1.97 to 385 nephelometric turbidity units (NTU) during Q2 2005. Turbidity is a measure of the clarity of water and is used as an indicator of the solids present in a water sample and overall water quality.

2.2.2 Laboratory Analyses

The results of the laboratory analyses performed on the groundwater samples collected during June 2005 are provided in Appendix A. A discussion of the results of the laboratory analyses performed on the groundwater samples are presented in the following subsections.

2.2.2.1 Laboratory Analyses for BTEX and PAH

Each groundwater sample collected during the June 2005 sampling event was analyzed for BTEX and PAH compounds. The results of these analyses are presented and compared to WDNR Preventive Action Limits (PALs) and Enforcement Standards (ESs) in Table 2-5. Table 2-5 identifies parameters detected at concentrations exceeding their respective PALs (shown as bolded values). Parameters with concentrations exceeding both PALs and ESs are presented as shaded and bolded values in Table 2-5. Exceedences are summarized in the following paragraphs.

Groundwater Sample Results

As shown in Table 2-5, benzene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluoranthene, fluorene, naphthalene, and pyrene were detected at concentrations exceeding their respective PALs and/or ESs in the groundwater samples collected from the shallow monitoring well network. The results are as follows:

WDNR PAL Exceedences

- Benzene was detected at concentrations exceeding the PAL of 0.5 micrograms per liter (µg/L) in the groundwater samples collected from wells MW-7S, and MW-34S.
- Benzo(a)pyrene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from wells MW-34S, MW-7S, and TG1-1.
- Benzo(b)fluoranthene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from wells MW-34S, and TG1-1.
- Chrysene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from wells MW-34S, and TG1-1.
- Fluoranthene was detected at a concentration exceeding the PAL of 80 µg/L in the groundwater sample collected from wells MW-34S and TG1-1.
- Fluorene was detected at concentrations exceeding the PAL of 80 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.
- Naphthalene was detected at concentrations exceeding the PAL of 8 µg/L in the groundwater samples from wells MW-7S, MW-33S, MW-34S, TG1-1 and TG1-2.
- Pyrene was detected at a concentration exceeding the PAL of 50 µg/L in the groundwater sample collected from wells MW-34S and TG1-1.

WDNR ES Exceedences

- Benzene was detected at concentrations exceeding the ES of 5 µg/L in the groundwater sample collected from well MW-34S.
- Benzo(a)pyrene was detected at concentrations exceeding the ES of 0.2 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.
- Benzo(b)fluoranthene was detected at concentrations exceeding the ES of 0.2 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.
- Chrysene was detected at concentrations exceeding the ES of 0.2 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.
- Fluoranthene was detected at a concentration exceeding the ES of 400 µg/L in the groundwater sample collected from well MW-34S.

- Fluorene was detected at a concentration exceeding the ES of 400 µg/L in the groundwater sample collected from well MW-34S.

- Naphthalene was detected at concentrations exceeding the ES of 40 µg/L in the groundwater samples collected from wells MW-7S, MW-34S, and TG1-1.

- Pyrene was detected at a concentration exceeding the ES of 250 µg/L in the groundwater sample collected from wells MW-34S and TG1-1.

The plume boundary is primarily in an area encompassing five shallow monitoring wells (MW-7S, MW-33S, MW-34S, TG1-1, and TG1-2). The majority of PAL and ES exceedences are associated with wells MW-34S and TG1-1 in which free product has historically been observed. In general, PAH concentrations measured in groundwater samples collected from the rest of the site were at relatively low levels with a few PAL/ES exceedences. Based on these detected concentrations, the contaminant plume generally demonstrates a northeasterly trend, as indicated in Figure 2-1, similar to the previous 25 quarterly groundwater sampling events.

A summary of the concentration of contaminants at wells that have regularly exceeded PALs and/or ESs during the last 12 quarters (3 years) is presented in Table 2-6. Levels of benzene, naphthalene, fluorene, and benzo(a)pyrene fluctuate over wide ranges in some of these wells. However, several constituents have shown an overall decreasing trend in monitoring wells MW-32S, MW-33S and MW-35S. Benzene, fluorene, and benzo(a)pyrene, concentrations have remained relatively constant in MW-7S; however, naphthalene concentrations show a decreasing trend in MW-7S. Well MW-34S has shown overall fluctuating levels in benzene, naphthalene, fluorene, and benzo(a)pyrene. During Q2 2005, a trace amount of free product was detected in well MW-34S. Varying levels of free product have been found in MW-34S in the recent past. This correlates with the elevated levels of constituents found in MW-34S. Well TG1-1 has shown fluctuating naphthalene, fluorene, and benzo(a)pyrene concentrations since it was first sampled in Q3 2000. This fluctuating concentration could be due to the presence of free product which has historically been observed in well TG1-1.

2.2.2.2 Laboratory Analyses for Treatment Performance Monitoring

The groundwater samples collected from the treatment performance monitoring wells were analyzed for microbial enumeration, NO_3-N, NO_2-N, TKN, NH_3-N, PO_4-P, ORP, BOD, COD, TOC, BTEX, and PAHs. The analytical results for microbial enumeration, NO_3-N, NO_2-N, TKN, NH_3-N, PO_4-P, ORP, BOD, COD, and TOC are presented in Table 2-7. The analytical results for the treatment performance monitoring well groundwater samples are summarized below. The laboratory reports of nutrient and microbial analyses are also included in Appendix A.

Nitrogen and Phosphorous Compounds

Nitrate results include one detection from TG3-3 at 0.015 mg/L and non-detect results elsewhere. Nitrite was not detected above the detection limits in any of the treatment performance monitoring well samples. TKN results include one non-detect result and detections with concentrations ranging from 0.51 to 1.9 mg/L. Ammonia results include non-detect results and detections with concentrations ranging from 0.5 to 1.9 mg/L. Overall, nitrogen compound concentrations are at relatively low levels; however, previous sample results have indicated that NH_3-N concentrations are typically an order of magnitude greater than NO_3-N concentrations and approximately two orders or magnitude greater than NO_2-N.

PO_4-P was not detected in any of the treatment performance wells during Q2 2005. ORP was detected in only one sample (TG6-1) at a concentration of 0.016 mg/L.

BOD, COD, and TOC

BOD concentrations for the samples collected throughout the treatment system ranged from non-detect to 8.2 mg/L. COD concentrations for the samples collected throughout the treatment system ranged from 5.9 to 51.6 mg/L. TOC concentrations for the samples collected throughout the treatment system ranged from 4.2 to 17.5 mg/L. As expected, the treatment gate wells indicate less BOD compared to COD. COD indicates the presence of constituents that exert an

oxygen demand, including carbon compounds such as the site contaminants in the groundwater, and other constituents such as ammonia, sulfurous compounds; and biological material such as humic acids and detritus. A significant portion of oxygen demand exerted by the constituents measured in the COD test may not be readily biodegradable and would typically exert the oxygen demand over an extended time period. The oxygen demand exerted by the constituents the COD analysis detected is catalyzed chemically and thermally. The low BOD indicates low concentrations of material that is readily biodegradable and/or quickly oxidized.

Microbial Enumeration

The total microbial populations for TG1 and TG2 ranged from 9.6×10^2 to 7.8×10^4 colony forming units per milliliter (CFU/mL) during Q2 2005. The total microbial population for TG3 and TG4 ranged from 5.2×10^3 to 8.0×10^5 CFU/mL during Q2 2005. The total microbial populations for TG5 and TG6 ranged from 1.5×10^2 to 1.0×10^4 CFU/mL during Q2 2005.

The result of degrader microbial population analysis for TG1 and TG2 ranged from non-detect to 4.0×10^4 CFU/mL during Q2 2005. The degrader microbial populations for TG3 ranged from not detect to 2×10^2 CFU/mL during Q2 2005. The degrader microbial populations for TG4 and TG5 were all non-detect during Q2 2005. The degrader microbial populations for TG6 ranged from non-detect to 3.3×10^2 CFU/mL during Q2 2005.

LEGEND

- CABLE FENCE
- CATCH BASIN
- HYDRANT
- SIGN
- FREE PRODUCT COLLECTION SUMP
- UTILITY POLE
- SAMPLING MANHOLE
- MONITORING WELL
- INJECTION WELL
- STAFF GAUGE
- PIEZOMETER
- CURRENT RIVER CHANNEL
- FORMER RIVER CHANNEL
- DIRECTION OF GROUNDWATER FLOW
- 726 GROUNDWATER ELEVATION CONTOUR DASHED WHERE INFERRED
- ESTIMATED BOUNDARY OF CONTAMINANT PLUME

N

0 100' SCALE

N:678.210
E:1134.580
ELEV = 720.37
CP-4

SG-01

MW-7S 715.52

PZ-02 714.51

MW-34S 715.22

MW-33S 715.08

Existing Building Pad Elev. 721.6

MW-5S 718.63

MW-32S 715.38

PZ-03 716.41

Little Menomonee River

GATE 4 715.53
TG4-1 715.43
TG4-2
TG4-3 715.82

GATE 5 715.35
TG5-1 715.44
TG5-2
TG5-3 715.54

SILO ENCLOSURE

MW-27S 717.00

MW-35S 715.43

GATE 3
TG3-1 715.52
TG3-2 715.74
TG3-3 715.56

PZ-04

MW-9S 715.37

722.66 MW-30S

TG1-3 715.43
TG1-2 716.14
TG1-1 717.01

PZ-10 718.43

GATE 1

PZ-01 715.74

GATE 6
TG6-1 715.92
TG6-2 715.86
TG6-3 715.89

DRAINAGE SWALE

WOODS

MW-28S 716.11

TG2-3 716.07
TG2-2 716.38
TG2-1 716.85

PZ-09 717.88

715.97 MW-29S

GATE 2

MW-37S 716.32

MW-36S 717.41

MW-6S 719.09

EXISTING SHEET PILE (TYP.)

N:211.070
E:1932.560
ELEV = 723.48
CP-5

PZ-07 723.16

PZ-06 721.84

MW-31S 720.81

PZ-05 720.89

MW-10S 718.55

MW-26S 726.77

DECON. PAD

ASPHALT (TYP.)

GRAVEL (TYP.)

ASPHALT PAD

CONSTRUCTION TRAILERS

DRUM STORAGE AREA

TREATED SOIL AND SEDIMENT FILL AREA

N:-44.630
E:753.830
ELEV = 735.22
CP-3

MW-25S 734.32

MW-13S 733.88

N:-80.570
E:1177.070
ELEV = 737.17
CP-6

FIGURE 2-1

WESTON SOLUTIONS

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Suite 500
Vernon Hills, Illinois
60061

GROUNDWATER ELEVATION CONTOUR MAP-2ND QUARTER 2005
KERR McGEE CORPORATION
MOSS-AMERICAN SITE
Milwaukee, Wisconsin

LEGEND

- CABLE FENCE
- CATCH BASIN
- HYDRANT
- SIGN
- FREE PRODUCT COLLECTION SUMP
- UTILITY POLE
- SAMPLING MANHOLE
- MONITORING WELL
- INJECTION WELL
- STAFF GAUGE
- PIEZOMETER
- CURRENT RIVER CHANNEL
- FORMER RIVER CHANNEL
- DIRECTION OF GROUNDWATER FLOW
- 726 GROUNDWATER ELEVATION CONTOUR DASHED WHERE INFERRED
- ESTIMATED BOUNDARY OF CONTAMINANT PLUME

N

0 100' SCALE

N:678.210
E:1134.580
ELEV = 720.37
CP-4

Little Menomonee River

Existing Building
Pad Elev. 721.6

SILO ENCLOSURE

DRAINAGE SWALE

EXISTING SHEET PILE (TYP.)

DECON. PAD

ASPHALT PAD

DRUM STORAGE AREA

CONSTRUCTION TRAILERS

ASPHALT (TYP.)

GRAVEL (TYP.)

TREATED SOIL AND SEDIMENT FILL AREA

WOODS

GATE 1

GATE 2

GATE 3

GATE 4

GATE 5

GATE 6

SG-03 715.52

MW-7S 716.94

MW-34S 716.91

PZ-02 715.78

MW-33S 716.70

MW-5S 719.39

MW-32S 716.94

PZ-03 (FROZEN)

MW-27S 718.38

MW-30S

MW-35S 716.97

TG1-3 717.90

TG1-2 717.91

TG1-1 718.21

PZ-10 719.96

MW-28S 718.19

TG2-3 (FROZEN)

TG2-2 (FROZEN)

TG2-1 718.11

PZ-09 719.73

MW-29S 717.71

MW-37S 717.54

MW-36S 718.63

MW-6S 720.65

PZ-06 722.46

MW-31S (FROZEN)

PZ-07 (FROZEN)

MW-26S (FROZEN)

MW-25S (FROZEN)

MW-13S (FROZEN)

N:-80.570
E:1177.070
ELEV = 737.17
CP-6

N:-44.630
E:753.830
ELEV = 735.22
CP-3

MW-3S 723.98

TG4-1 (FROZEN)

TG4-2

TG4-3 (FROZEN)

TG5-1 716.54

TG5-2 (FROZEN)

TG5-3 (FROZEN)

PZ-01 (FROZEN)

TG3-1 716.92

TG3-2

TG3-3 (FROZEN)

PZ-04 (FROZEN)

MW-9S 716.93

TG6-1 717.12

TG6-2 717.07

TG6-3 717.09

PZ-05 721.31

N:211.070
E:1932.560
ELEV = 723.49
CP-5

MW-10S 720.81

716 717 718 719 720 721 722 723 725 730 735 736 737 738

WESTON SOLUTIONS	750 E. Bunker Ct. Suite 500 Vernon Hills, Illinois 60061

FIGURE 2-2

GROUNDWATER ELEVATION CONTOUR MAP–1ST QUARTER 2005
KERR McGEE CORPORATION
MOSS–AMERICAN SITE
Milwaukee, Wisconsin

Table 2-1

Groundwater Elevation Measurements
Shallow and Containment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Well ID	Ground Elevation	TOC Elevation	Depth to Water	GW Elevation	Product Thickness
MW-3S	729.71	731.45	7.55	723.90	None Detected
MW-5S	723.41	724.63	6.00	718.63	
MW-6S	723.11	725.24	6.15	719.09	
MW-7S	719.47	721.59	6.27	715.32	
MW-9S	719.15	721.66	6.29	715.37	
MW-10S	723.95	726.76	8.21	718.55	
MW-13S	737.73	738.58	4.70	733.88	
MW-25S	736.95	739.19	4.87	734.32	
MW-26S	732.31	731.87	5.10	726.77	
MW-27S	720.57	723.10	6.10	717.00	
MW-28S	719.64	722.13	6.02	716.11	
MW-29S	719.51	722.17	6.20	715.97	
MW-30S	725.35	727.34	4.68	722.66	
MW-31S	725.29	725.31	4.50	720.81	
MW-32S	719.68	722.79	7.41	715.38	
MW-33S	719.25	721.81	6.73	715.08	
MW-34S	718.97	721.52	6.30	715.22	
MW-35S	718.14	721.75	6.32	715.43	
MW-36S	720.41	723.21	5.80	717.41	
MW-37S	721.33	723.30	6.98	716.32	

Notes:

All values in feet.

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

TOC = Top of well casing.

GW = Groundwater.

Depth to groundwater was measured on 20 June 2005

NM= Not measured

NC= Could not be calculated due to insufficient data

Table 2-2

Groundwater Elevation Measurements
Treatment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Well ID	Ground Elevation	TOC Elevation	Depth to Water	GW Elevation	Hydraulic Gradient (ft/ft)	Groundwater Velocity (ft/day)	Product Thickness
TG1-1	719.77	723.32	6.31	717.01	0.0158	0.1493	Trace
TG1-2	720.06	722.81	6.67	716.14			None Detected
TG1-3	719.56	722.53	7.10	715.43			
TG2-1	720.67	723.80	6.95	716.85	0.0078	0.0737	
TG2-2	720.62	723.05	6.67	716.38			
TG2-3	720.06	722.61	6.54	716.07			
TG3-1	719.14	721.05	5.53	715.52	-0.0014	-0.0132	
TG3-2	718.87	720.92	5.18	715.74			
TG3-3	718.35	720.60	4.94	715.66			
TG4-1	718.06	721.14	5.71	715.43	-0.0039	-0.0369	
TG4-2	718.26	720.75	5.22	715.53			
TG4-3	718.01	720.04	4.22	715.82			
TG5-1	717.60	721.12	5.68	715.44	-0.0010	-0.0094	
TG5-2	718.18	720.63	5.28	715.35			
TG5-3	718.17	719.99	4.45	715.54			
TG6-1	719.47	721.96	6.04	715.92	0.0003	0.0028	
TG6-2	719.70	722.05	6.19	715.86			
TG6-3	719.58	722.47	6.58	715.89			

Notes:

All values in feet.
All elevation measurements are with respect to Mean Sea Level (MSL).
Porosity of soil is assumed to be 0.3.
Hydraulic conductivity of treatment gate material is assumed to be 1E-3 cm/s = 3.0 ft/day.
TOC = Top of the casing.
GW = Groundwater.
ft/day = feet per day.
ft/ft = feet per foot.
NM= Not measured
NC= Could not be calculated due to insufficient data

A negative value in the groundwater velocity column indicates that the groundwater flow was opposite to the general direction of groundwater flow at the site.
Depth to groundwater was measured on 20 June 2005

Table 2-3

Groundwater Elevation Measurements
Piezometer and Staff Guage
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Well ID	Ground Elevation	TOC Elevation	Depth to Water	Water Elevation	Product Thickness
Groundwater					
PZ-01	718.04	721.05	5.31	715.74	None Detected
PZ-02	718.89	721.84	7.33	714.51	
PZ-03	719.00	722.09	6.68	715.41	
PZ-04	717.30	720.22	NM	NC	
PZ-05	724.34	727.43	6.54	720.89	
PZ-06	724.62	727.79	6.15	721.64	
PZ-07	725.78	728.72	5.56	723.16	
PZ-09	721.12	724.08	6.20	717.88	
PZ-10	722.04	725.05	6.62	718.43	Trace
Surface Water					
ID	Top of Staff Gauge Elevation		Depth to Water	Water Elevation	
SG-01	716.22		NM	NC	

Notes:
All values in feet.
All elevation measurements are with respect to Mean Sea Level (MSL).
TOC = Top of well casing.
GW = Groundwater.
NM= Not measured
NC= Could not be calculated due to insufficient data

Depth to groundwater was measured on 20 June 2005

Table 2-4

Field-Measured Parameters
Shallow Groundwater and Containment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Well ID	pH (Standard Units)	Specific Conductance (mmho/cm)	Temperature (Deg C)	Redox Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
MW-5S	7.11	0.863	13.18	-22.4	0.02	3.70
MW-6S	7.22	0.671	13.99	33.1	0.08	385
MW-7S	6.98	0.865	13.45	-87.0	0.12	9.25
MW-9S	6.72	0.941	13.32	-60.2	0.75	14.5
MW-27S	6.83	1.016	12.85	-42.7	0.13	20.2
MW-28S	6.94	0.844	14.34	-16.5	0.06	2.39
MW-29S	6.86	0.770	14.36	32.2	0.08	5.65
MW-30S	6.74	2.301	14.25	22.0	0.03	1.97
MW-31S	7.19	0.666	13.75	82.4	0.09	18.2
MW-32S	6.84	0.853	14.24	-67.5	0.14	6.48
MW-33S	6.80	1.086	12.70	-58.1	0.08	2.77
MW-34S	NM	NM	NM	NM	NM	NM
MW-35S	6.81	1.193	15.68	-10.7	0.05	6.57
MW-36S	7.03	0.655	13.8	48.9	0.05	260
MW-37S	6.47	0.918	13.44	-2.9	0.88	12.98

Table 2-6 (Continued)

Field-Measured Parameters
Treatment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Well ID	pH (Standard Units)	Specific Conductance (umhos/cm)	Temperature (Deg C)	Redox Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
TG1-1	NM	NM	NM	NM	NM	NM
TG1-2	7.00	0.850	13.26	-116.5	0.03	10.5
TG1-3	7.00	0.856	14.23	-115.8	0.17	6.10
TG2-1	7.23	0.782	14.64	-8.70	0.10	4.18
TG2-2	7.02	0.697	13.71	-108.9	0.11	4.31
TG2-3	6.82	0.907	15.08	-101.6	0.09	8.17
TG3-1	6.96	1.076	14.59	-20.1	0.05	3.48
TG3-2	7.05	0.775	14.89	-112.7	0.04	16.7
TG3-3	6.84	0.892	14.02	-109.8	0.03	6.85
TG4-1	7.10	1.012	14.83	-87.2	0.23	4.25
TG4-2	7.16	0.971	14.65	-120.2	0.09	2.43
TG4-3	7.13	0.957	14.05	-99.7	0.04	4.78
TG5-1	7.03	1.010	14.84	-15.7	0.14	NM
TG5-2	7.21	0.922	16.50	-126.4	0.05	NM
TG5-3	7.25	0.820	13.25	-75.2	0.05	NM
TG6-1	7.04	1.130	15.44	-84.9	0.28	3.89
TG6-2	6.64	1.509	14.31	-5.50	0.07	15.9
TG6-3	6.69	1.421	14.95	-49.8	0.29	4.54

Notes:
S - Shallow well.
TG - Treatment gate performance monitoring well.
NA - Not applicable; monitoring well is only sampled for DO and depth to groundwater.
NM - Not measured due to equipment failure or free product in well.
umhos/cm - micromhos per centimeter
Deg C - Degrees Celsius
mV - millivolt
mg/L - milligram per liter
NTU - Nephelometric Turbidity unit

Table 2-5

Groundwater Sample Analytical Results
Shallow Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-MW5S-062005-2	MA3-MW6S-062205-8	MA3-MW7S-062105-4	MA3-MW7S-062105-4-DP	MA3-MW9S-062305-6	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	MW5S	MW6S	MW7S	MW7S	MW9S		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/20/2005	6/22/2005	6/21/2005	6/21/2005	6/23/2005		
Units	ug/l	ug/l	ug/l	ug/l	ug/l		
VOCs							
Benzene	0.2 U	0.2 U	1.6 J	1.6 J	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.2 U	11	11	0.2 U	140	700
Toluene	0.2 U	0.2 U	1 U	1 U	0.2 U	68.6	343
Total Xylenes	0.6 U	0.6 U	19	18	0.6 U	124	650
PAHs							
Acenaphthene	1.6 U	1.6 U	36	35	1.6 U	NA	NA
Acenaphthylene	1.6 U	1.6 U	30	31	1.6 U	NA	NA
Anthracene	0.04 U	0.04 U	0.041 U	0.041 U	0.04 U	600	3000
Benzo(a)anthracene	0.02 U	0.02 U	0.034 J	0.02 U	0.02 U	NA	NA
Benzo(a)pyrene	0.02 U	0.02 U	0.024 J	0.02 U	0.02 U	0.02	0.2
Benzo(b)fluoranthene	0.04 U	0.04 U	0.041 U	0.041 U	0.04 U	0.02	0.2
Benzo(g,h,i)perylene	0.1 U	0.1 U	0.1 U	0.1 U	0.099 U	NA	NA
Benzo(k)fluoranthene	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	NA	NA
Chrysene	0.08 U	0.08 U	0.082 U	0.081 U	0.079 U	0.02	0.2
Dibenz(a,h)anthracene	0.04 U	0.04 U	0.041 U	0.041 U	0.04 U	NA	NA
Fluoranthene	0.04 U	0.04 U	0.076 J	0.041 U	0.04 U	80	400
Fluorene	0.5 U	0.51 U	6.3	5.8	0.5 U	80	400
Indeno(1,2,3-cd)pyrene	0.08 U	0.08 U	0.082 U	0.081 U	0.079 U	NA	NA
Naphthalene	1.6 U	1.6 U	1700	2000	1.6 U	8	40
Phenanthrene	0.08 U	0.08 U	0.17 J	0.11 J	0.079 U	NA	NA
Pyrene	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Shallow Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-MW27S-062305-1	MA3-MW28S-062205-12	MA3-MW29S-062105-2	MA3-MW30S-062005-1	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	MW27S	MW28S	MW29S	MW30S		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/23/2005	6/22/2005	6/21/2005	6/20/2005		
Units	ug/l	ug/l	ug/l	ug/l		
VOCs						
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	140	700
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs						
Acenaphthene	1.6 U	1.6 U	1.6 U	1.6 U	NA	NA
Acenaphthylene	1.6 U	1.6 U	1.6 U	1.6 U	NA	NA
Anthracene	0.04 U	0.04 U	0.04 U	0.041 U	600	3000
Benzo(a)anthracene	0.02 U	0.02 U	0.02 U	0.02 U	NA	NA
Benzo(a)pyrene	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.2
Benzo(b)fluoranthene	0.04 U	0.04 U	0.04 U	0.041 U	0.02	0.2
Benzo(g,h,i)perylene	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA
Benzo(k)fluoranthene	0.02 U	0.02 U	0.02 U	0.02 U	NA	NA
Chrysene	0.081 U	0.08 U	0.08 U	0.082 U	0.02	0.2
Dibenz(a,h)anthracene	0.04 U	0.04 U	0.04 U	0.041 U	NA	NA
Fluoranthene	0.04 U	0.04 U	0.04 U	0.041 U	80	400
Fluorene	0.5 U	0.5 U	0.5 U	0.51 U	80	400
Indeno(1,2,3-cd)pyrene	0.081 U	0.08 U	0.08 U	0.082 U	NA	NA
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U	8	40
Phenanthrene	0.081 U	0.08 U	0.08 U	0.082 U	NA	NA
Pyrene	0.18 U	0.18 U	0.18 U	0.18 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Containment Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-MW31S-062205-9	MA3-MW32S-062305-2	MA3-MW32S-062305-2-DP	MA3-MW33S-062305-3	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	MW31S	MW32S	MW32S	MW33S		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/22/2005	6/23/2005	6/23/2005	6/23/2005		
Units	ug/l	ug/l	ug/l	ug/l		
VOCs						
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.2 U	0.2 U	5.8	140	700
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	6.6	124	650
PAHs						
Acenaphthene	1.6 U	1.7 U	1.7 U	130	NA	NA
Acenaphthylene	1.6 U	1.7 U	1.7 U	9.7 J	NA	NA
Anthracene	0.04 U	0.041 U	0.043 U	0.25	600	3000
Benzo(a)anthracene	0.02 U	0.021 U	0.021 U	0.021 U	NA	NA
Benzo(a)pyrene	0.02 U	0.021 U	0.021 U	0.021 U	0.02	0.2
Benzo(b)fluoranthene	0.04 U	0.041 U	0.043 U	0.042 U	0.02	0.2
Benzo(g,h,i)perylene	0.09 U	0.1 U	0.11 U	0.1 U	NA	NA
Benzo(k)fluoranthene	0.02 U	0.021 U	0.021 U	0.021 U	NA	NA
Chrysene	0.07 U	0.083 U	0.086 U	0.083 U	0.02	0.2
Dibenz(a,h)anthracene	0.04 U	0.041 U	0.043 U	0.042 U	NA	NA
Fluoranthene	0.04 U	0.041 U	0.043 U	0.042 U	80	400
Fluorene	0.5 U	0.52 U	0.53 U	48	80	400
Indeno(1,2,3-cd)pyrene	0.07 U	0.083 U	0.086 U	0.083 U	NA	NA
Naphthalene	1.6 U	1.7 U	1.7 U	240	8	40
Phenanthrene	0.07 U	0.083 U	0.086 U	8.6	NA	NA
Pyrene	0.18 U	0.19 U	0.19 U	0.19 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Containment Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-MW34S-062105-6	MA3-MW35S-062105-5	MA3-MW36S-062105-3	MA3-MW37S-062105-1	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	MW34S	MW35S	MW36S	MW37S		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/21/2005	6/21/2005	6/21/2005	6/21/2005		
Units	ug/l	ug/l	ug/l	ug/l		
VOCs						
Benzene	6 J	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	20 J	0.2 U	0.2 U	0.2 U	140	700
Toluene	4 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	62	0.6 U	0.6 U	0.6 U	124	650
PAHs						
Acenaphthene	790	1.6 U	1.6 U	1.6 U	NA	NA
Acenaphthylene	110 J	1.6 U	1.6 U	1.6 U	NA	NA
Anthracene	160	0.04 U	0.04 U	0.039 U	600	3000
Benzo(a)anthracene	100	0.024 J	0.02 U	0.02 U	NA	NA
Benzo(a)pyrene	42	0.02 U	0.02 U	0.02 U	0.02	0.2
Benzo(b)fluoranthene	36	0.04 U	0.04 U	0.039 U	0.02	0.2
Benzo(g,h,i)perylene	16	0.1 U	0.1 U	0.098 U	NA	NA
Benzo(k)fluoranthene	22	0.02 U	0.02 U	0.02 U	NA	NA
Chrysene	130	0.08 U	0.081 U	0.079 U	0.02	0.2
Dibenz(a,h)anthracene	4.2	0.04 U	0.04 U	0.039 U	NA	NA
Fluoranthene	650	0.59	0.04 U	0.039 U	80	400
Fluorene	640	0.5 U	0.5 U	0.49 U	80	400
Indeno(1,2,3-cd)pyrene	20	0.08 U	0.081 U	0.079 U	NA	NA
Naphthalene	7600	1.6 U	1.6 U	1.6 U	8	40
Phenanthrene	1500	0.08 U	0.081 U	0.079 U	NA	NA
Pyrene	540	0.36 J	0.18 U	0.18 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Treatment Performance Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-TG1-1-062205-15	MA3-TG1-2-062205-14	MA3-TG1-3-062205-13	MA3-TG2-1-062205-7	MA3-TG2-2-062205-10	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	TG1-1	TG1-2	TG1-3	TG2-1	TG2-2		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/22/2005	6/22/2005	6/22/2005	6/22/2005	6/22/2005		
Units	ug/l	ug/l	ug/l	ug/l	ug/l		
VOCs							
Benzene	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	17	1 U	0.2 U	0.2 U	0.2 U	140	700
Toluene	1 U	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	23	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs							
Acenaphthene	470	31	1.6 U	1.7 U	1.6 U	NA	NA
Acenaphthylene	39 J	1.6 U	1.6 U	1.7 U	1.6 U	NA	NA
Anthracene	71	0.76	0.04 J	0.04 U	0.03 U	600	3000
Benzo(a)anthracene	49	0.06 J	0.02 U	0.02 U	0.02 U	NA	NA
Benzo(a)pyrene	21	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.2
Benzo(b)fluoranthene	18	0.04 U	0.04 U	0.04 U	0.03 U	0.02	0.2
Benzo(g,h,i)perylene	8.5	0.09 U	0.1 U	0.1 U	0.09 U	NA	NA
Benzo(k)fluoranthene	11	0.02 U	0.02 U	0.02 U	0.02 U	NA	NA
Chrysene	60	0.07 U	0.08 U	0.08 U	0.07 U	0.02	0.2
Dibenz(a,h)anthracene	2 J	0.04 U	0.04 U	0.04 U	0.03 U	NA	NA
Fluoranthene	290	1.7	0.19 J	0.04 U	0.04 J	80	400
Fluorene	320	14	0.51 U	0.52 U	0.49 U	80	400
Indeno(1,2,3-cd)pyrene	10	0.07 U	0.08 U	0.08 U	0.07 U	NA	NA
Naphthalene	1500	18	1.6 U	1.7 U	1.6 U	8	40
Phenanthrene	660	4.1	0.08 U	0.08 U	0.07 U	NA	NA
Pyrene	240	1.1	0.18 U	0.19 U	0.18 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Treatment Performance Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-TG2-3-062205-11	MA3-TG3-1-062205-4	MA3-TG3-2-062205-5	MA3-TG3-3-062205-6	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	TG2-3	TG3-1	TG3-2	TG3-3		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/22/2005	6/22/2005	6/22/2005	6/22/2005		
Units	ug/l	ug/l	ug/l	ug/l		
VOCs						
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	140	700
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs						
Acenaphthene	1.6 U	1.6 U	1.6 U	1.6 U	NA	NA
Acenaphthylene	1.6 U	1.6 U	1.6 U	1.6 U	NA	NA
Anthracene	0.04 U	0.041 U	0.04 U	0.039 U	600	3000
Benzo(a)anthracene	0.02 U	0.02 U	0.02 U	0.019 U	NA	NA
Benzo(a)pyrene	0.02 U	0.02 U	0.02 U	0.019 U	0.02	0.2
Benzo(b)fluoranthene	0.04 U	0.041 U	0.04 U	0.039 U	0.02	0.2
Benzo(g,h,i)perylene	0.1 U	0.1 U	0.099 U	0.097 U	NA	NA
Benzo(k)fluoranthene	0.02 U	0.02 U	0.02 U	0.019 U	NA	NA
Chrysene	0.08 U	0.081 U	0.079 U	0.078 U	0.02	0.2
Dibenz(a,h)anthracene	0.04 U	0.041 U	0.04 U	0.039 U	NA	NA
Fluoranthene	0.04 J	0.041 U	0.04 U	0.056 J	80	400
Fluorene	0.5 U	0.51 U	0.5 U	0.49 U	80	400
Indeno(1,2,3-cd)pyrene	0.08 U	0.081 U	0.079 U	0.078 U	NA	NA
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U	8	40
Phenanthrene	0.08 U	0.081 U	0.079 U	0.078 U	NA	NA
Pyrene	0.18 U	0.18 U	0.18 U	0.18 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Treatment Performance Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-TG4-1-062205-1	MA3-TG4-1-062205-1-DP	MA3-TG4-2-062205-2	MA3-TG4-3-062205-3	MA3-TG5-1-062105-10	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	TG4-1	TG4-1	TG4-2	TG4-3	TG5-1		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/22/2005	6/22/2005	6/22/2005	6/22/2005	6/21/2005		
Units	ug/l	ug/l	ug/l	ug/l	ug/l		
VOCs							
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	140	700
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs							
Acenaphthene	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	NA	NA
Acenaphthylene	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	NA	NA
Anthracene	0.03 U	0.03 U	0.04 U	0.04 U	0.04 U	600	3000
Benzo(a)anthracene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	NA
Benzo(a)pyrene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02	0.2
Benzo(b)fluoranthene	0.03 U	0.03 U	0.04 U	0.04 U	0.04 U	0.02	0.2
Benzo(g,h,i)perylene	0.09 U	0.09 U	0.1 U	0.1 U	0.099 U	NA	NA
Benzo(k)fluoranthene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA	NA
Chrysene	0.07 U	0.07 U	0.08 U	0.08 U	0.079 U	0.02	0.2
Dibenz(a,h)anthracene	0.03 U	0.03 U	0.04 U	0.04 U	0.04 U	NA	NA
Fluoranthene	0.03 U	0.03 U	0.22	0.04 U	0.04 U	80	400
Fluorene	0.49 U	0.49 U	0.5 U	0.51 U	0.5 U	80	400
Indeno(1,2,3-cd)pyrene	0.07 U	0.07 U	0.08 U	0.08 U	0.079 U	NA	NA
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	8	40
Phenanthrene	0.07 U	0.07 U	0.08 U	0.08 U	0.079 U	NA	NA
Pyrene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Treatment Performance Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-TG5-2-062105-11	MA3-TG5-3-062105-12	MA3-TG6-1-062105-9	MA3-TG6-2-062105-8	MA3-TG6-3-062105-7	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	TG5-2	TG5-3	TG6-1	TG6-2	TG6-3		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/21/2005	6/21/2005	6/21/2005	6/21/2005	6/21/2005		
Units	ug/l	ug/l	ug/l	ug/l	ug/l		
VOCs							
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	140	700
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs							
Acenaphthene	1.6 U	1.6 U	1.6 U	1.6 U	1.7 U	NA	NA
Acenaphthylene	1.6 U	1.6 U	1.6 U	1.6 U	1.7 U	NA	NA
Anthracene	0.04 U	0.041 U	0.041 U	0.04 U	0.042 U	600	3000
Benzo(a)anthracene	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	NA	NA
Benzo(a)pyrene	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02	0.2
Benzo(b)fluoranthene	0.04 U	0.041 U	0.041 U	0.04 U	0.042 U	0.02	0.2
Benzo(g,h,i)perylene	0.099 U	0.1 U	0.1 U	0.1 U	0.11 U	NA	NA
Benzo(k)fluoranthene	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	NA	NA
Chrysene	0.079 U	0.081 U	0.081 U	0.081 U	0.084 U	0.02	0.2
Dibenz(a,h)anthracene	0.04 U	0.041 U	0.041 U	0.04 U	0.042 U	NA	NA
Fluoranthene	0.066 J	0.053 J	0.041 U	0.071 J	0.05 J	80	400
Fluorene	0.5 U	0.51 U	0.51 U	0.5 U	0.53 U	80	400
Indeno(1,2,3-cd)pyrene	0.079 U	0.081 U	0.081 U	0.081 U	0.084 U	NA	NA
Naphthalene	1.6 U	1.6 U	1.6 U	1.6 U	1.7 U	8	40
Phenanthrene	0.079 U	0.081 U	0.081 U	0.081 U	0.084 U	NA	NA
Pyrene	0.18 U	0.18 U	0.18 U	0.18 U	0.19 U	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-5 (Continued)

Groundwater Sample Analytical Results
Field Blank and Trip Blank Samples
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Sample ID	MA3-FB-062005-3	MA3-FB-062105-13	MA3-FB-062205-16	MA3-FB-062305-4	MA3-TB-062105-14	MA3-TB-062205-17	MA3-TB-062305-4	WDNR PAL (ug/L)	WDNR ES (ug/L)
Well ID	Field Blank	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank		
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater		
Date	6/20/2005	6/21/2005	6/22/2005	6/23/2005	6/21/2005	6/22/2005	6/23/2005		
Units	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		
VOCs									
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	140	700
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs									
Acenaphthene	1.6 U	1.6 U	1.6 U	1.5 U	-	-	-	NA	NA
Acenaphthylene	1.6 U	1.6 U	1.6 U	1.5 U	-	-	-	NA	NA
Anthracene	0.041 U	0.039 U	0.04 U	0.038 U	-	-	-	600	3000
Benzo(a)anthracene	0.02 U	0.02 U	0.02 U	0.019 U	-	-	-	NA	NA
Benzo(a)pyrene	0.02 U	0.02 U	0.02 U	0.019 U	-	-	-	0.02	0.2
Benzo(b)fluoranthene	0.041 U	0.039 U	0.04 U	0.038 U	-	-	-	0.02	0.2
Benzo(g,h,i)perylene	0.1 U	0.098 U	0.1 U	0.095 U	-	-	-	NA	NA
Benzo(k)fluoranthene	0.02 U	0.02 U	0.02 U	0.019 U	-	-	-	NA	NA
Chrysene	0.081 U	0.078 U	0.08 U	0.076 U	-	-	-	0.02	0.2
Dibenz(a,h)anthracene	0.041 U	0.039 U	0.04 U	0.038 U	-	-	-	NA	NA
Fluoranthene	0.041 U	0.039 U	0.04 U	0.038 U	-	-	-	80	400
Fluorene	0.51 U	0.49 U	0.5 U	0.48 U	-	-	-	80	400
Indeno(1,2,3-cd)pyrene	0.081 U	0.078 U	0.08 U	0.076 U	-	-	-	NA	NA
Naphthalene	1.6 U	1.6 U	1.6 U	1.5 U	-	-	-	8	40
Phenanthrene	0.081 U	0.078 U	0.08 U	0.076 U	-	-	-	NA	NA
Pyrene	0.18 U	0.18 U	0.18 U	0.17 U	-	-	-	50	250

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
VOC-Volatile Organic Compound.
PAH-Polynuclear Aromatic Hydrocarbon.
PAL-Wisconsin Department of Natural Resources (WDNR) Preventative Action Limit.
ES-Enforcement Standard (WDNR).
NA-Not Applicable. PAL or ES not available for this parameter.
NS-Not sampled due to frozen conditions.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-6

Concentration Trends in Groundwater Monitoring Wells
Third Quarter 2002 through Second Quarter 2005
Moss-American Site
Milwaukee, Wisconsin

	MW-7S	MW-32S	MW-33S	MW-34S	MW-35S	TG1-1
Benzene (ug/L)						
Third Quarter (September '02)	5 U	0.20 U	4 UJ	10 UJ	0.20 U	1.3
Fourth Quarter (December '02)	4 U	0.20 U	2 U	5.6 J	0.20 U	4.9 J
First Quarter (March '03)	2.9 J	0.20 U	1.0 U	6.4 J	0.20 U	2.7 J
Second Quarter (June '03)	2.4 J	0.2 U	2 U	15 J	0.2 U	1.4 J
Third Quarter (September '03)	10 U	0.2 U	0.3 J	10 U	0.2 U	2 U
Fourth Quarter (December '03)	2.3 J	0.2 U	0.2 U	6.6	0.2 U	1 U
First Quarter (March '04)	4 U	0.2 U	4 J	5.7 J	0.2 U	1.5
Second Quarter (June '04)	2 U	0.2 U	1 U	7.8 J	0.2 U	1 U
Third Quarter (September '04)	2.2 J	0.2 U	1 U	7.1 J	0.2 U	2 U
Fourth Quarter (December '04)	8.6	0.2 U	0.2 U	7.2 J	0.2 U	0.5 J
First Quarter (March '05)	2.9 J	0.2 U	0.2 U	6.2 J	0.2 U	1 U
Second Quarter (June '05)	1.6 J	0.2 U	0.2 U	6 J	0.2 U	1 U
Naphthalene (ug/L)						
Third Quarter (September '02)	4,000	1.00 U	2,700	7,000	1.00 U	1,200
Fourth Quarter (December '02)	2,800	1.0 U	2,100	5,300	1.00 U	8,900
First Quarter (March '03)	2,800	1.0 U	2,300	6,100	1.00 U	1,900
Second Quarter (June '03)	3,400	1.2 U	2,500	6,100	1.2 U	1,300 J
Third Quarter (September '03)	3,800	1.3 U	2,600	5,000	1.2 U	5,800
Fourth Quarter (December '03)	3,000	1.4 U	58 J	6,500 J	1.3 U	1,500
First Quarter (March '04)	2,500	1.4 UJ	660 J	7,400	1.4 U	2,200
Second Quarter (June '04)	2,700	1.6 U	600	6,800	1.5 U	1,500
Third Quarter (September '04)	2,700	1.6 U	970	11,000 J	1.7 U	3,200
Fourth Quarter (December '04)	1,600	1.5 U	140	5,700	1.5 U	1,600
First Quarter (March '05)	1,600	1.6 U	170	6,000	1.6 U	5,400
Second Quarter (June '05)	1,700	1.7 U	240	7,600	1.6 U	1,500

Table 2-6 (Continued)

Concentration Trends in Groundwater Monitoring Wells
Third Quarter 2002 through Second Quarter 2005
Moss-American Site
Milwaukee, Wisconsin

	MW-7S	MW-32S	MW-33S	MW-34S	MW-35S	TG1-1
Fluorene (ug/L)						
Third Quarter (September '02)	11	0.20 U	60	130	0.20 U	330
Fourth Quarter (December '02)	11	0.20 UJ	59.0 J	170 J	0.20 UJ	3,400J
First Quarter (March '03)	9.5	1.9	62	150	0.20 U	230
Second Quarter (June '03)	8	0.17 U	72	84	0.18 U	170 J
Third Quarter (September '03)	11	0.19 U	88	86	0.18 U	2,400
Fourth Quarter (December '03)	8	0.18 U	0.84 J	180 J	0.17 U	150
First Quarter (March '04)	7	0.18 UJ	13	470	0.21 J	160
Second Quarter (June '04)	6.9	0.17 U	19	280	0.19 J	150
Third Quarter (September '04)	7.8	0.18 U	59	2100 J	1.3	800
Fourth Quarter (December '04)	7.5	0.17 U	6.9	99	0.39 J	420
First Quarter (March '05)	6.5	0.18	9.1	370	0.18 U	2,500
Second Quarter (June '05)	6.3	0.52 U	48	640	0.5 U	320
Benzo(a) pyrene (ug/L)						
Third Quarter (September '02)	0.20 U	0.02 U	0.02 U	0.78	0.02 U	25
Fourth Quarter (December '02)	0.20 U	0.02 UJ	0.02 UJ	5.6 J	0.02 UJ	290J
First Quarter (March '03)	0.20 U	0.02 U	0.02 U	3.2	0.02 U	15
Second Quarter (June '03)	0.02 U	0.02 U	0.02 U	0.18	0.02 U	7.9 J
Third Quarter (September '03)	0.022 U	0.29 J	0.021 U	0.047 J	0.02 U	190
Fourth Quarter (December '03)	0.019 U	0.02 U	0.02 U	5.9 J	0.028 J	5.9
First Quarter (March '04)	0.019 U	0.02 UJ	0.02 UJ	29	0.02 U	6.2
Second Quarter (June '04)	0.019 U	0.019 U	0.019 U	17	0.022 J	5.1
Third Quarter (September '04)	0.02 U	0.02 U	0.021 U	140 J	0.021 U	56
Fourth Quarter (December '04)	0.019 U	0.019 U	0.02 U	0.15	0.019 U	33
First Quarter (March '05)	0.02 U	0.02 U	0.019 U	21	0.02 U	200
Second Quarter (June '05)	0.024 J	0.021 U	0.021 U	42	0.02 U	21

U - Constituent not detected; method detection limit (MDL) of the analysis reported.
J - Estimated concentration.
ug/L - Micrograms per liter.

Table 2-7
Groundwater Sample Analytical Results
Treatment Performance Monitoring Wells- Nutrient and Biological Parameters
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

	Sample Identification					
Parameter (mg/L)	TG1-1	TG1-2	TG1-3	TG2-1	TG2-2	TG2-3
Ammonia Nitrogen	0.11 U	0.75	1.2	0.11 U	0.5 J	1.9
Biochemical oxygen demand	5 U	5.1	6.7	2.1 U	2.9 U	6.7
Chemical oxygen demand	51.6	30.1	28.9	6.6 J	5.9 J	31.3
Nitrate (as N)	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrite	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U
Kjeldahl nitrogen	1.3	1.2	1.5	0.5 U	0.58 J	1.9
Ortho-Phosphate as P	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total Organic Carbon	17.5	15.3	14.2	5	4.2	14.5
Total Phosphorus as PO4 water	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Degrader Microbial Population (mean) (cfu/mL)	320	40000	120	--	100 U	200
Total Microbial Population (mean) (cfu/mL)	960	54000	78000	--	4800	20000

	Sample Identification					
Parameter (mg/L)	TG3-1	TG3-2	TG3-3	TG4-1	TG4-2	TG4-3
Ammonia Nitrogen	0.11 U	0.76	1.4	0.52	0.64	0.73
Biochemical oxygen demand	1.8 U	2.7 U	8.2	2.5 U	2.5 U	2.6 U
Chemical oxygen demand	20.2	18.2	28.7	14.1	24.6	24.6
Nitrate (as N)	0.04 U	0.4 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrite	0.015 U	0.015 U	0.015 J	0.015 U	0.015 U	0.015 U
Kjeldahl nitrogen	0.69 J	1.1	1.9	0.89 J	1.2	1.2
Ortho-Phosphate as P	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total Organic Carbon	8.7	10.4	13.1	8.9	10.5	10.3
Total Phosphorus as PO4 water	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Degrader Microbial Population (mean) (cfu/mL)	100 U	100 U	200	100 U	100 U	100 U
Total Microbial Population (mean) (cfu/mL)	10000	5200	110000	20000	9600	800000

	Sample Identification					
Parameter (mg/L)	TG5-1	TG5-2	TG5-3	TG6-1	TG6-2	TG6-3
Ammonia Nitrogen	0.11 U	0.11 U	0.71	1.7	0.9	0.87
Biochemical oxygen demand	1.6 U	1.8 U	1.7 U	4.2 U	1.5 U	1.3 U
Chemical oxygen demand	10.9	14.8	14.1	23.4	18	21.1
Nitrate (as N)	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Nitrite	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U
Kjeldahl nitrogen	0.51 J	0.88 J	0.92 J	1.8	1.2	1.7
Ortho-Phosphate as P	0.01 U	0.01 U	0.01 U	0.016 J	0.01 U	0.01 U
Total Organic Carbon	4.6	6.8	6.5	11.1	9	9.6
Total Phosphorus as PO4 water	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Degrader Microbial Population (mean) (cfu/mL)	100 U	100 U	100 U	330	100 U	100 U
Total Microbial Population (mean) (cfu/mL)	6300	1400	150	3300	10000	310

U-Constituent not detected. Detection limit indicated.
J-Estimated concentration.
-- Data not available because sample container spilled during shipment.

SECTION 3
EVALUATION OF PILOT SCALE OPERATIONS

Augmentation of the groundwater treatment system was initiated in October 2000 by injecting air at the treatment gates. In late June 2001, nutrient addition was initiated at TG1 using a solution containing potassium nitrate (KNO_3) and potassium phosphate ($KHPO_4$). System modifications were proposed in the Q2 2002 Quarterly Groundwater Treatment Performance Monitoring Report and are discussed in this section. Information regarding system performance is also presented.

3.1 DISSOLVED OXYGEN

During Q2 2005, the DO concentrations in all of the wells remained below 1.0 mg/L.

$N\text{-}NO_3$ was only detected in one well, and $N\text{-}NO_2$ was not detected in any of the treatment performance wells sampled in Q2 2005. This indicates that nitrogen is primarily present in its reduced state, and a reducing environment exists in the wells. Nitrogen data were not collected for the shallow monitoring wells.

Well packers were installed in the TG5 injection wells in June 2000; however, no discernable change in the DO levels were observed in the TG5 wells until Q1 and Q2 2003. KMC/WESTON attempted to install inflatable bladder packers in TG1 and TG2 injection wells in August 2001. However, the packers could not be properly installed due to the injection well configuration.

KMC/WESTON will continue to evaluate alternatives for air introduction into the treatment gates.

3.2 NUTRIENTS AND pH

Nutrient injection was discontinued at gate area TG1 as a part of the site modifications recommended in the Q2 2002 Monitoring Report. This took place at the end of October 2002, after the Agencies granted approval. However, nutrient and contaminant levels will continue to be monitored.

Recommended guidelines for bioremediation of contaminants in site groundwater include a pH range of 6.5 to 8.5 S.U. and a minimum carbon-nitrogen-phosphorous (C:N:P) ratio of 100:14:1. The range of pH values measured in the treatment performance monitoring wells (6.64 to 7.25 S.U.) is sufficient to facilitate biological activity.

Table 3-1 contains calculated C:N:P ratios for each of the treatment performance monitoring wells. During Q2 2005, the treatment performance monitoring wells did not exhibit the desired C:N:P ratio of 100:14:1. Nitrogen and phosphorous appear to be the limiting nutrients at the site.

3.3 BACTERIAL POPULATIONS

Total bacterial counts in the performance monitoring wells were found to have significantly increased in TG1 through TG4 from Q1 2005 counts. Total bacterial counts in TG5 and TG6 were found to have remained relatively steady from Q1 to Q2 2005. Degrader bacterial counts in the performance monitoring wells remained relatively steady or increased slightly in most wells during Q2 2005 when compared to Q1 2005.

Figure 3-1 compares the degrader populations in TG1 and TG2 since Q1 2001. As indicated in Figure 3-1, there has been a trend of general decrease in the degrader bacterial population levels in TG1 and TG2 since Q1 2001. It is uncertain what the cause of this bacterial decrease is at the site. However, this decrease in degrader bacterial population needs to be closely monitored so that actions to augment the degrader population can be implemented as necessary.

3.4 HYDROGEOLOGY

KMC/WESTON identified a potential concern associated with the site hydrogeology in the Q2 2001 Monitoring Report. This concern is primarily based on the premise that low flow conditions may cause anoxic conditions and may inhibit KMC/WESTON's ability to introduce nutrients and other additives at an optimum level due to poor dispersion from the injection point. Low flow conditions are apparent based on the hydraulic gradient and flow velocities derived. A low flow velocity may be indirectly beneficial as a longer residence time in the treatment gate may allow for more effective biodegradation. No significant change was observed in relation to site hydrogeology during Q2 2005.

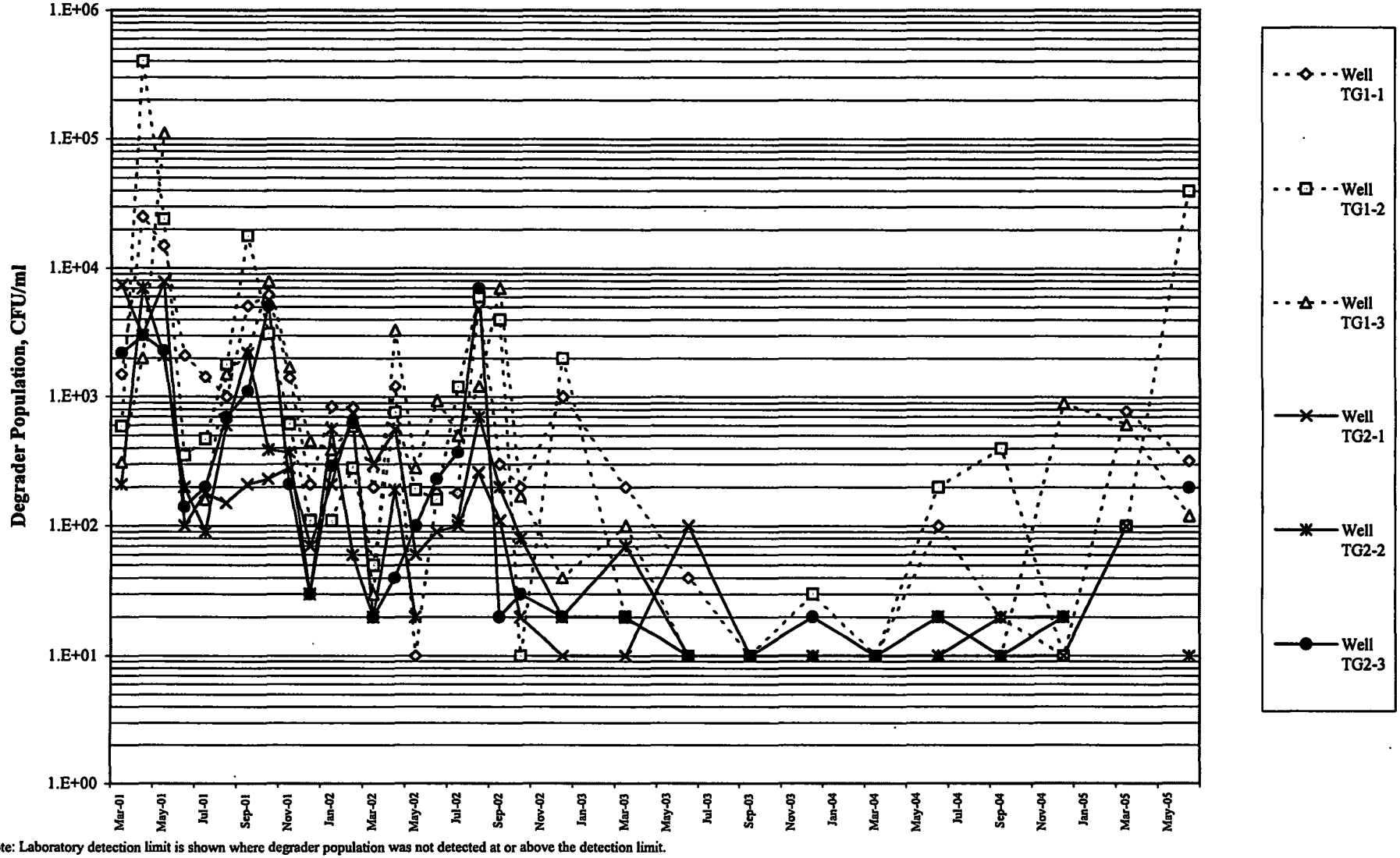
3.5 SITE MODIFICATIONS

Per the Q2 2002 Monitoring Report recommendations, modifications have been made to the system at the site. In October 2002, the performance monitoring well sampling frequency and scope reductions went into effect following the Agencies' approval. Groundwater sampling was revised to a quarterly sampling regime instead of a monthly sampling regime. In addition, shallow monitoring wells MW-3S, MW-10S, MW-13S, MW-20S, MW-25S, and MW-26S, and intermediate wells MW-3I, MW-7I, MW-9I, and MW-20I were removed from the groundwater monitoring program. However, these wells were not abandoned, per WDNR's request, with the exception of MW-20S and MW-20I abandoned during LMR diversion. Water levels will continue to be gathered from these wells on a quarterly basis to assist with the production of the groundwater elevation contour map. Discontinuation of nutrient injection at gate TG1 was also approved and was implemented in October 2002.

The hydrogeologic investigation proposed in the Q2 2002 Monitoring Report took place in December 2002. This work included the installation of nine piezometers (PZ-01 thru PZ-07, PZ-09, and PZ-10) as well as a staff gauge (SG-1). Records were updated with this information, and used to prepare the groundwater elevation contour map for this quarter.

Figure 3-1

Comparison of Degrader Populations in Treament Gates 1 and 2 since Q2 2001
Moss-American Site
Milwaukee, Wisconsin



Note: Laboratory detection limit is shown where degrader population was not detected at or above the detection limit.

Table 3-1

Calculation of Carbon:Nitrogen:Phosphorous Ratios
Treatment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Second Quarter 2005

Well	Carbon[1], mg/L	Total Nitrogen[2], mg/L	Phosphorous[3], mg/L	C-N-P Ratio (100-14-1 desired)		
TG1-1	17.5	ND	ND	100	0	0
TG1-2	15.3	0.75	ND	100	5	0
TG1-3	14.2	1.2	ND	100	8	0
TG2-1	5	ND	ND	100	0	0
TG2-2	4.2	0.5	ND	100	12	0
TG2-3	14.5	1.9	ND	100	13	0
TG3-1	8.7	ND	ND	100	0	0
TG3-2	10.40	0.76	ND	100	7	0
TG3-3	13.1	1.415	ND	100	0	0
TG4-1	8.9	0.52	ND	100	6	0
TG4-2	10.5	0.64	ND	100	6	0
TG4-3	10.3	0.73	ND	100	7	0
TG5-1	4.60	ND	ND	100	0	0
TG5-2	6.8	ND	ND	100	0	0
TG5-3	6.5	0.71	ND	100	0	0
TG6-1	11.10	1.7	ND	100	15	0
TG6-2	9	0.9	ND	100	10	0
TG6-3	9.6	0.87	ND	100	9	0
Site Average	10.01	0.97	ND	100.00	5.50	0.00

1 - Carbon measured as Total Organic Carbon (non-purgable).
2 - Nitrogen measured as NH_3-N, NO_2-N, and NO_3-N.
3 - Phosphorous measured as phosphate (PO_4-P).
ND - Constituent not detected.

--- Not available
Shaded values indicate values at or above desired quantity.

SECTION 4

REFERENCES

Weston Solutions, Inc. (WESTON). 1999. *Quality Assurance Project Plan for Installation of Groundwater Remedial System.* October 1999.

WESTON. 2001. *Quality Assurance Project Plan for Installation of Groundwater Remedial System Addendum No.1.* May 2001.

APPENDIX A

JUNE 2005 GROUNDWATER SAMPLE ANALYTICAL RESULTS

Memo

To: File

From: Andris J. Slesers

Date: 8/25/2005

Re: Microbac Data Set ME0506699

The shipment of samples from Weston to Microbac, on 22 June 2005, which arrived on 23 June 2005, was found to have a leaking sample bottle. This was for sample MA3-TG2-1-062205-7, and due to no sample volume Microbac could not analyzed for Total Aerobic Bacteria and Total Aerobic Degrader Bacteria.

Additionally, the chain of custody did not include three sample bottles which were shipped in this shipment. Weston requested these samples be added to the chain of custody manually by Microbac. However, incorrect sample labels were assigned to the three sample bottles. This went unnoticed by Weston until the data package was already finalized. Below are the incorrect sample IDs, as reported in the Microbac report, as well as the correct sample ID.

Incorrect Label/Sample ID	Corrected Label/Sample ID
MA3-TG4-1-062205-4	MA3-TG3-1-062205-4
MA3-TG4-2-062205-5	MA3-TG3-2-062205-5
MA3-TG4-3-062205-6	MA3-TG3-3-062205-6

Microbac

July 21, 2005

Tom Graan
Weston Solutions, Inc.
750 East Bunker Court
Suite 500
Vernon Hills, IL 60061-1450

Work Order No.: ME0506699

RE: Kerr McGee / Moss American

Dear Tom Graan:

Microbac Laboratories, Inc. received 11 samples on 6/23/2005 9:25:00 AM for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted. This report includes the numbered pages as well as the Cooler Inspection Report and Chain of Custody form(s).

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
Microbac Laboratories, Inc.

For:
Lisa M. Torres
Project Manager

Enclosures

Microbac

Work Order Sample Summary

Date: *Thursday, July 21, 2005*

CLIENT: Weston Solutions, Inc.
Project: Kerr McGee / Moss American
Lab Order: ME0506699

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0506699-01A	MA3-TG1-1-062205-15		6/22/2005 5:50:00 PM	6/23/2005
ME0506699-02A	MA3-TG1-2-062205-14		6/22/2005 5:40:00 PM	6/23/2005
ME0506699-03A	MA3-TG1-3-062205-13		6/22/2005 5:30:00 PM	6/23/2005
ME0506699-04A	MA3-TG2-2-062205-10		6/22/2005 3:50:00 PM	6/23/2005
ME0506699-05A	MA3-TG2-3-062205-11		6/22/2005 4:00:00 PM	6/23/2005
ME0506699-06A	MA3-TG4-1-062205-1		6/22/2005 8:50:00 AM	6/23/2005
ME0506699-07A	MA3-TG4-2-062205-2		6/22/2005 9:00:00 AM	6/23/2005
ME0506699-08A	MA3-TG4-3-062205-3		6/22/2005 9:10:00 AM	6/23/2005
ME0506699-09A	MA3-TG4-1-062205-4		6/22/2005 10:30:00 AM	6/23/2005
ME0506699-10A	MA3-TG4-2-062205-5		6/22/2005 10:40:00 AM	6/23/2005
ME0506699-11A	MA3-TG4-3-062205-6		6/22/2005 10:50:00 AM	6/23/2005

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG1-1-062205-15	***Work Order / ID:***	ME0506699-01A
Sample Description:		***Collection Date:***	06/22/05 17:50
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	*960*	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	*320*	100		cfu/ml	1	06/24/05 14:50

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX 219.769.1664

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG1-2-062205-14	***Work Order / ID:***	ME0506699-02A
Sample Description:		***Collection Date:***	06/22/05 17:40
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	***54000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***40000***	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG1-3-062205-13	***Work Order / ID:***	ME0506699-03A
Sample Description:		***Collection Date:***	06/22/05 17:30
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	***78000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***120***	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG2-2-062205-10	***Work Order / ID:***	ME0506699-04A
Sample Description:		***Collection Date:***	06/22/05 15:50
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	***4800***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***ND***	100		cfu/ml	1	06/24/05 14:50

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG2-3-062205-11	***Work Order / ID:***	ME0506699-05A
Sample Description:		***Collection Date:***	06/22/05 16:00
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	***20000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***200***	100		cfu/ml	1	06/24/05 14:50

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG4-1-062205-1	***Work Order / ID:***	ME0506699-06A
Sample Description:		***Collection Date:***	06/22/05 08:50
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	***20000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***ND***	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG4-2-062205-2	***Work Order / ID:***	ME0506699-07A
Sample Description:		***Collection Date:***	06/22/05 09:00
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
COMPARATIVE ENUMERATION ASSA Method: **9215B MOD**				Prep Date/Time: **06/24/05 14:50**	Analyst: **RC**		
Total Aerobic Bacteria	A	***9600***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***ND***	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG4-3-062205-3	***Work Order / ID:***	ME0506699-08A
Sample Description:		***Collection Date:***	06/22/05 09:10
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	***800000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***ND***	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG4-1-062205-4	***Work Order / ID:***	ME0506699-09A
Sample Description:		***Collection Date:***	06/22/05 10:30
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	***10000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***ND***	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG4-2-062205-5	***Work Order / ID:***	ME0506699-10A
Sample Description:		***Collection Date:***	06/22/05 10:40
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	*5200*	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	*ND*	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG4-3-062205-6	***Work Order / ID:***	ME0506699-11A
Sample Description:		***Collection Date:***	06/22/05 10:50
Sample Matrix:	Aqueous	***Date Received:***	06/23/05 09:25

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
COMPARATIVE ENUMERATION ASSA Method: **9215B MOD**				Prep Date/Time: **06/24/05 14:50**	Analyst: **RC**		
Total Aerobic Bacteria	A	***110000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***200***	100		cfu/ml	1	06/24/05 14:50

Microbac

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed	N/A	=	Not Applicable			
ug/L	=	Micrograms per Liter (ppb)	mg/L	=	Milligrams per Liter (ppm)	cfu	=	Colony Forming Unit
ug/Kg	=	Micrograms per Kilogram (ppb)	mg/Kg	=	Milligrams per Kilogram (ppm)	ng/L	=	Nanogram per Liter

U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated Method Blank
D	=	Surrogate recoveries are not calculated due to sample dilution
ND	=	Not Detected at the Reporting Limit
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate

DF = Dilution Factor RL = Reporting Limit ST = Sample Type MDL = Method Detection Limit

SAMPLE TYPES

A	=	Analyte
I	=	Internal Standard
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"	OPR	=	Ongoing Precision and Recovery Standard
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"			
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate			
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate			
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank			
ICV	=	Initial Calibration Verification	ICB	=	Initial Calibration Blank			
PDS	=	Post Digestion Spike	SD	=	Serial Dilution			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirem ents of the applicable accreditation, unless otherwise noted. Com plete lists of individual analytes pursuant to each certification below are available upon request.

- Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #100435)
- Illinois Department of Public Health for the microbiological analysis of drinking water (registry #175458)
- Indiana DEM approved support laboratory for solid waste and wastewater analyses
- Indiana SDH for the chemical analysis of drinking water (lab #C-45-02)
- Indiana SDH for the microbiological analysis of drinking water (lab #M-45-08)
- Iowa DNR for the analysis of samples applicable to the Iowa Wastewater and Underground Storage Tank programs (lab #274)
- Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #0061)
- North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations (certificate #597)
- Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

MICROBAC LOCATIONS

Corporate	-	Wexford, PA	**Camp Hill Division**	-	Camp Hill, PA
Pittsburgh Division	-	Warrendale, PA	**Knoxville Division**	-	Maryville, TN
Erie Division	-	Erie, PA / Wilkes-Barre, PA	**Venice Division**	-	Venice, FL / Fort Myers, FL
New Castle Division	-	New Castle, PA	**South Carolina Division**	-	New Ellenton, SC
Kentucky Testing Division	-	Louisville, KY / Evansville, IN	**Fayetteville Division**	-	Fayetteville, NC
Massachusetts Division	-	Marlboro, MA	**Southern Testing Division**	-	Wilson, NC
Gascoyne Division	-	Baltimore, MD	**Hauser Division**	-	Boulder, CO
Corona Division	-	Corona, CA	**Friend Laboratory**	-	Waverly, NY
South Jersey Division	-	Turnersville, NJ			

Microbac Laboratories, Inc.

250 W. 84th Drive
Merrillville, IN 46410
(219) 769-8378

COOLER INSPECTION

Thursday, June 23, 2005

Client Name WESTON - VERNON HILLS
Work Order Number ME0506699
Checklist completed by _____ 6-27-05
Signature Date

Date / Time Received: 6/23/2005 9:25:00 AM
Received by: DP
Reviewed by _____ 6/27/05
Initials Date

Carrier name: FedEx

After-Hour Arrival?	Yes ☐	No ☑	
Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☑ DP 6-23-05
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody included sufficient client identification?	Yes ☑	No ☐	
Chain of custody included sufficient sample collector information?	Yes ☑	No ☐	
Chain of custody included a sample description?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Chain of custody identified the appropriate matrix?	Yes ☐	No ☑	
Chain of custody included date of collection?	Yes ☑	No ☐	
Chain of custody included time of collection?	Yes ☑	No ☐	
Chain of custody identified the appropriate number of containers?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☐	No ☑	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Chain of custody identified the appropriate preservatives?	Yes ☐	No ☑	
Samples properly preserved?	Yes ☑	No ☐	

If No, adjusted by? _____ Date/Time _____

Chain of custody included the requested analyses?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Samples received on ice?	Yes ☑	No ☐

Container/Temp Blank temperature: Temp: 3 °C

VOA vials have zero headspace? No VOA vials submitted ☑ Yes ☐ No ☐

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

General Comments: The lid was not secure for sample MA3-TG2-1-062205-7 and the sample was lost in the cooler. Samples 09A, 10A, and 11A were not listed on the COC. They were added to the end of the work order and login information was obtained from the sample labels.

Sample ID	Client Sample ID	Cont. Lot #	Comments
ME0506699-01A	MA3-TG1-1-062205-15	021-12	BTEX
ME0506699-02A	MA3-TG1-2-062205-14		BTEX
ME0506699-03A	MA3-TG1-3-062205-13		BTEX
ME0506699-04A	MA3-TG2-2-062205-10		BTEX
ME0506699-05A	MA3-TG2-3-062205-11		BTEX
ME0506699-06A	MA3-TG4-1-062205-1		BTEX
ME0506699-07A	MA3-TG4-2-062205-2		BTEX
ME0506699-08A	MA3-TG4-3-062205-3		BTEX
ME0506699-09A	MA3-TG4-1-062205-4		BTEX
ME0506699-10A	MA3-TG4-2-062205-5		BTEX

Sample ID	Client Sample ID	Cont. Lot #	Comments
ME0506699-11A	MA3-TG4-3-062205-6		BTEX

Client representative contacted: _____ Date contacted: _____

Contacted by: _____ Regarding: _____

Notes: _____

Chain of Custody Record

COC ID: COC-062205-7

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT: PER QUOTE

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	MICROBIAL ENUMERATION	CEA BTEX								
					Filtered										
					Container	POLY-100mL									
					Preservative	N/A								2506699	
	MA3-TG1-1-062205-15	G		N	6/22/2005 17:50	1								01-A	
	MA3-TG1-2-062205-14	G		N	6/22/2005 17:40	1								02-A	
	MA3-TG1-3-062205-13	G		N	6/22/2005 17:30	1								03-A	
	MA3-TG2-1-062205-7	G		N	6/22/2005 14:30	1									
	MA3-TG2-2-062205-10	G		N	6/22/2005 15:50	1								04-A	
	MA3-TG2-3-062205-11	G		N	6/22/2005 16:00	1								05-A	
	MA3-TG4-1-062205-1	G		N	6/22/2005 08:50	1								06-A	
	MA3-TG4-2-062205-2	G		N	6/22/2005 09:00	1								07-A	
	MA3-TG4-3-062205-3	G		N	6/22/2005 09:10	1								08-A	
														09-A	
														10-A	
														11-A	

Remarks/Comments
5?. 3°C 16
4,5,6

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package (Y) N
COC Tape was unbroken on outer package Y (N)
COC Tape ws present on sample Y (N)
COC Tape was unbroken on sample Y NA

Received in good condition (Y) N #7 leaking
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/22/05 2000					[signature]	6/23/05 0925

Sampled By [signature]

Microbac

July 21, 2005

Tom Graan
Weston Solutions, Inc.
750 East Bunker Court
Suite 500
Vernon Hills, IL 60061-1450

Work Order No.: ME0506648

RE: Kerr McGee / Moss American

Dear Tom Graan:

Microbac Laboratories, Inc. received 6 samples on 6/22/2005 10:55:00 AM for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted. This report includes the numbered pages as well as the Cooler Inspection Report and Chain of Custody form(s).

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
Microbac Laboratories, Inc.

for

Lisa M. Torres
Project Manager

Enclosures

Microbac

Work Order Sample Summary

Date: *Thursday, July 21, 2005*

CLIENT: Weston Solutions, Inc.
Project: Kerr McGee / Moss American
Lab Order: ME0506648

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0506648-01A	MA3-TG5-1-062105-10		6/21/2005 4:00:00 PM	6/22/2005
ME0506648-02A	MA3-TG5-2-062105-11		6/21/2005 4:10:00 PM	6/22/2005
ME0506648-03A	MA3-TG5-3-062105-12		6/21/2005 4:20:00 PM	6/22/2005
ME0506648-04A	MA3-TG6-1-062105-9		6/21/2005 2:30:00 PM	6/22/2005
ME0506648-05A	MA3-TG6-2-062105-8		6/21/2005 2:20:00 PM	6/22/2005
ME0506648-06A	MA3-TG6-3-062105-7		6/21/2005 2:15:00 PM	6/22/2005

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG5-1-062105-10	***Work Order / ID:***	ME0506648-01A
Sample Description:		***Collection Date:***	06/21/05 16:00
Sample Matrix:	Aqueous	***Date Received:***	06/22/05 10:55

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	*6300*	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	*ND*	100		cfu/ml	1	06/24/05 14:50

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG5-2-062105-11	***Work Order / ID:***	ME0506648-02A
Sample Description:		***Collection Date:***	06/21/05 16:10
Sample Matrix:	Aqueous	***Date Received:***	06/22/05 10:55

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	*1400*	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	*ND*	100		cfu/ml	1	06/24/05 14:50

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG5-3-062105-12	***Work Order / ID:***	ME0506648-03A
Sample Description:		***Collection Date:***	06/21/05 16:20
Sample Matrix:	Aqueous	***Date Received:***	06/22/05 10:55

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	*150*	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	*ND*	100		cfu/ml	1	06/24/05 14:50

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX 219.769.1664

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ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG6-1-062105-9	***Work Order / ID:***	ME0506648-04A
Sample Description:		***Collection Date:***	06/21/05 14:30
Sample Matrix:	Aqueous	***Date Received:***	06/22/05 10:55

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
COMPARATIVE ENUMERATION ASSA Method: **9215B MOD**				Prep Date/Time: **06/24/05 14:50**	Analyst: **RC**		
Total Aerobic Bacteria	A	*3300*	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	*330*	100		cfu/ml	1	06/24/05 14:50

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG6-2-062105-8	***Work Order / ID:***	ME0506648-05A
Sample Description:		***Collection Date:***	06/21/05 14:20
Sample Matrix:	Aqueous	***Date Received:***	06/22/05 10:55

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
COMPARATIVE ENUMERATION ASSA Method: **9215B MOD**				Prep Date/Time: **06/24/05 14:50**	Analyst: **RC**		
Total Aerobic Bacteria	A	***10000***	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	***ND***	100		cfu/ml	1	06/24/05 14:50

250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 · TEL.219.769.8378 FAX 219.769.1664

Microbac

ANALYTICAL RESULTS

Date: *Thursday, July 21, 2005*

Client:	Weston Solutions, Inc.		
Client Project:	Kerr McGee / Moss American		
Client Sample ID:	MA3-TG6-3-062105-7	***Work Order / ID:***	ME0506648-06A
Sample Description:		***Collection Date:***	06/21/05 14:15
Sample Matrix:	Aqueous	***Date Received:***	06/22/05 10:55

COMPARATIVE ENUMERATION ASSA Method: **9215B MOD** Prep Date/Time: **06/24/05 14:50** Analyst: **RC**

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
Total Aerobic Bacteria	A	*310*	100		cfu/ml	1	06/24/05 14:50
Total Aerobic Degrader Bacteria	A	*ND*	100		cfu/ml	1	06/24/05 14:50

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FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed	N/A	=	Not Applicable			
ug/L	=	Micrograms per Liter (ppb)	mg/L	=	Milligrams per Liter (ppm)	cfu	=	Colony Forming Unit
ug/Kg	=	Micrograms per Kilogram (ppb)	mg/Kg	=	Milligrams per Kilogram (ppm)	ng/L	=	Nanogram per Liter

U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated Method Blank
D	=	Surrogate recoveries are not calculated due to sample dilution
ND	=	Not Detected at the Reporting Limit
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate

DF = Dilution Factor RL = Reporting Limit ST = Sample Type MDL = Method Detection Limit

SAMPLE TYPES

A	=	Analyte
I	=	Internal Standard
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"	OPR	=	Ongoing Precision and Recovery Standard
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"			
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate			
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate			
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank			
ICV	=	Initial Calibration Verification	ICB	=	Initial Calibration Blank			
PDS	=	Post Digestion Spike	SD	=	Serial Dilution			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirem ents of the applicable accreditation, unless otherwise noted. Com plete lists of individual analytes pursuant to each certification below are available upon request.

- Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #100435)
- Illinois Department of Public Health for the microbiological analysis of drinking water (registry #175458)
- Indiana DEM approved support laboratory for solid waste and wastewater analyses
- Indiana SDH for the chemical analysis of drinking water (lab #C-45-02)
- Indiana SDH for the microbiological analysis of drinking water (lab #M-45-08)
- Iowa DNR for the analysis of samples applicable to the Iowa Wastewater and Underground Storage Tank programs (lab #274)
- Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #0061)
- North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations (certificate #597)
- Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

MICROBAC LOCATIONS

Corporate	-	Wexford, PA	**Camp Hill Division**	-	Camp Hill, PA
Pittsburgh Division	-	Warrendale, PA	**Knoxville Division**	-	Maryville, TN
Erie Division	-	Erie, PA / Wilkes-Barre, PA	**Venice Division**	-	Venice, FL / Fort Myers, FL
New Castle Division	-	New Castle, PA	**South Carolina Division**	-	New Ellenton, SC
Kentucky Testing Division	-	Louisville, KY / Evansville, IN	**Fayetteville Division**	-	Fayetteville, NC
Massachusetts Division	-	Marlboro, MA	**Southern Testing Division**	-	Wilson, NC
Gascoyne Division	-	Baltimore, MD	**Hauser Division**	-	Boulder, CO
Corona Division	-	Corona, CA	**Friend Laboratory**	-	Waverly, NY
South Jersey Division	-	Turnersville, NJ			

COC ID: COC-062105-7

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.006.0001 | Contact Phone No.: 847-918-4142

Lab: MICROBAC LABS | Lab Contact: N. MCDONALD

TAT: PER QUOTE | Lab Phone: 219-932-1770

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	MICROBIAL ENUMERATION N									
						Filtered									
						Container	POLY-100mL								
						Preservative	N/A							0506648	
	MA3-TG5-1-062105-10	G		N	6/21/2005 16:00	1									01-A
	MA3-TG5-2-062105-11	G		N	6/21/2005 16:10	1									02-A
	MA3-TG5-3-062105-12	G		N	6/21/2005 16:20	1									03-A
	MA3-TG6-1-062105-9	G		N	6/21/2005 14:30	1									04-A
	MA3-TG6-2-062105-8	G		N	6/21/2005 14:20	1									05-A
	MA3-TG6-3-062105-7	G		N	6/21/2005 14:15	1									06-A

Remarks/Comments

Seal on cooler, 4°C - good

Sampled By: [signature]

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5

COC Tape was present on outer package Y N

COC Tape was unbroken on outer package Y N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition Y N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/21/05 2000						
						[signature]	6-22-05/1055

Kerr-McGee
Moss American site
Milwaukee, Wisconsin
SDG# KMA66

water samples – BTEX (8021B)

1. Holding Times:

Lab ID	Client ID	Sample Date	Analysis Date
	MA3-		
4548192	MW-29S	6/21/05	6/23/05
4548193	MW29S-MS	6/21/05	6/23/05
4548194	MW29S-MSD	6/21/05	6/23/05
4548195	MW30S	6/21/05	6/23/05
4548196	MW34S	6/21/05	6/23/05
4548197	MW35S	6/21/05	6/23/05
4548198	MW36S	6/21/05	6/23/05
4548199	MW37S	6/21/05	6/23/05
4548200	MW5S	6/21/05	6/23/05
4548201	MW7S	6/21/05	6/23/05
4548202	MW7S-DP	6/21/05	6/23/05
4548203	FB-3	6/21/05	6/23/05
4548204	FB-13	6/21/05	6/23/05
4548205	TB-14	6/21/05	6/23/05
4548206	TG5-1	6/21/05	6/23/05
4548207	TG5-2	6/21/05	6/23/05
4548208	TG5-3	6/21/05	6/23/05
4548209	TG6-1	6/21/05	6/23/05
4548210	TG6-2	6/21/05	6/23/05
4548211	TG6-3	6/21/05	6/23/05

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

2. Method Blank:

One method blank was associated with the BTEX samples (BLK5313). The blank result was 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 required QC limits.

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

Sample MW29S was the MS/MSD. All recoveries were acceptable.

6. Laboratory Control Sample:

All laboratory control sample results were acceptable.

7. Trip Blanks:

One trip blank was associated with the samples. All trip blank results were non-detect. All results are acceptable.

8. Field Blanks:

One field blank was associated with the samples. All BTEX results were non-detect. All results are acceptable.

9. Field Duplicates:

Samples MW7SDP/MS7S are field duplicates. All results were non-detect.

10. Other

Several samples required dilutions. No qualifications are required.

Water Samples – Polynuclear Aromatic Hydrocarbons (PAHs by HPLC)

1. Holding Times:

Lab ID	Client ID	Sample Date	Extraction Date	Analysis Date
4548192	MW-29S	6/21/05	6/23/05	6/25/05
4548193	MW29S-MS	6/21/05	6/23/05	6/25/05
4548194	MW29S-MSD	6/21/05	6/23/05	6/25/05
4548195	MW30S	6/21/05	6/23/05	6/25/05
4548196	MW34S	6/21/05	6/23/05	6/26, 6/27/05
4548197	MW35S	6/21/05	6/23/05	6/25/05
4548198	MW36S	6/21/05	6/23/05	6/25/05
4548199	MW37S	6/21/05	6/23/05	6/25/05
4548200	MW5S	6/21/05	6/23/05	6/25/05
4548201	MW7S	6/21/05	6/23/05	6/26, 6/27/05
4548202	MW7S-DP	6/21/05	6/23/05	6/26, 6/27/05
4548203	FB-3	6/21/05	6/23/05	6/26/05
4548204	FB-13	6/21/05	6/23/05	6/26/05
4548206	TG5-1	6/21/05	6/23/05	6/26/05
4548207	TG5-2	6/21/05	6/23/05	6/26/05
4548208	TG5-3	6/21/05	6/23/05	6/26/05
4548209	TG6-1	6/21/05	6/23/05	6/26/05
4548210	TG6-2	6/21/05	6/23/05	6/26/05
4548211	TG6-3	6/21/05	6/23/05	6/26/05

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

2. Method Blank:

One method blank was associated with the samples (SBLKWD174). The method blanks were free of contamination.

3. Initial and Continuing Calibration:

Calibration results were acceptable.

4. Surrogate Recovery:

Two surrogates were used for two different detector columns. All NTB recoveries were acceptable. Several TRP results were diluted out due to sample dilutions. No qualifications are required.

5. Matrix Spike/Matrix Spike Duplicate:

Sample MW92S was run as a MS/MSD and associated with the remaining samples. All recoveries were acceptable.

6. Laboratory Control Sample:

One LCS was associated with the samples. All LCS recoveries were within required control limits.

7. Field Blanks:

Two field blanks were associated with the samples. The field blank results were non-detect.

8. Field Duplicates:

Samples MW7S-DP/MW7S are field duplicates. All results were non-detect.

9. Other

Several samples required dilutions.

Data reviewed by: T. Balla Date: 7/29/05

7802 948247 4548192-211

COC ID: COC-062105-5

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT:

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 350.2-NH3	EPA 353.2-NO2	EPA 353.2-NO3	EPA 365.3-ORTHO P, EPA 405.1-BOD	EPA 415.1-TOC	SW846 8021B-BTEX	TKN, TP PO4,COD			
					Filtered										
					Container	1-L Glass	40 ml Vials	40 ml Vials	500-ml Poly	250 ml Glass	40 ml Vials	1-L Glass			
					Preservative	N/A	N/A	H2SO4	N/A	N/A	HCl	N/A			
	MA3-MW29S-062105-2	G		N	6/21/2005 09:20						3				
	MA3-MW29S-062105-2-MSD	G		Y	6/21/2005 09:20						6				
	MA3-MW30S-062005-1	G		N	6/20/2005 18:05						3				
	MA3-MW34S-062105-6	G		N	6/21/2005 11:50						3				
	MA3-MW35S-062105-5	G		N	6/21/2005 11:45						3				
	MA3-MW36S-062105-3	G		N	6/21/2005 09:30						3				
	MA3-MW37S-062105-1	G		N	6/21/2005 09:15						3				
	MA3-MW5S-062005-2	G		N	6/20/2005 18:15						3				
	MA3-MW7S-062105-4	G		N	6/21/2005 11:40						3				
	MA3-MW7S-062105-4-DP	G		N	6/21/2005 11:40						3				
	MA3-TB-062105-14	G		N							3				
	MA3-TG5-1-062105-10	G		N	6/21/2005 16:00		1	1			3				
	MA3-TG5-2-062105-11	G		N	6/21/2005 16:10		1	1			3				
	MA3-TG5-3-062105-12	G		N	6/21/2005 16:20		1	1			3				
	MA3-TG6-1-062105-9	G		N	6/21/2005 14:30	1	1	1	1	1	3	1			
	MA3-TG6-2-062105-8	G		N	6/21/2005 14:20		1	1	1	1	3				
	MA3-TG6-3-062105-7	G		N	6/21/2005 14:15		1	1	1	1	3				

RECEIVED JUL 29 2005

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C: 1: 2.3° 2: 1.8° 3: 4.7° 4: 2.0° 5: 5.° 6: 4.7°

COC Tape was present on outer package (Y) N
COC Tape was unbroken on outer package (Y) N
COC Tape was present on sample Y N
COC Tape was unbroken on sample Y N
Received in good condition (Y) N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/21/05 2000					Kathy Bitting [signature]	6-22-05 0855

Sampled By [signature]

7802 948297 4548192-211

COC ID: COC-062105-6

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.006.0001 | Contact Phone No.: 847-918-4142

Lab: LANCASTER LABS | Lab Contact: C. SWEIGART

TAT: PER QUOTE | Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 350.2-NH3	SW846 8310-PAHS	TKN, TP PO4,COD							
						Filtered									
						Container	1-L Glass	1-L Amber	1-L Glass						
						Preservative	N/A	N/A	N/A						
	MA3-TG6-1-062105-9	G		N	6/21/2005 14:30		2								
	MA3-TG6-2-062105-8	G		N	6/21/2005 14:20	1	2	1							
	MA3-TG6-3-062105-7	G		N	6/21/2005 14:15	1	2	1							

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5	6
23°	18°	47°	20°	5°	47°

COC Tape was present on outer package (Y) N

COC Tape was unbroken on outer package (Y) N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition (Y) N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
	6/21/05 2000						6-22-05 0855

Sampled By

7802 948297 4548192-211

COC ID: COC-062105-2

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT: PER QUOTE

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	SW846 8310-PAHS									
						Filtered									
						Container	1-L Amber								
						Preservative	N/A								
	MA3-MW29S-062105-2	G		N	6/21/2005 09:20	2									
	MA3-MW29S-062105-2-MSD	G		Y	6/21/2005 09:20	4									
	MA3-MW34S-062105-6	G		N	6/21/2005 11:50	2									
	MA3-MW37S-062105-1	G		N	6/21/2005 09:15	2									

Remarks/Comments

Sampled By: M. P. V.

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5	6
2.3°	1.8°	4.7°	2.0°	5.0°	4.7°

COC Tape was present on outer package (Y) N
COC Tape was unbroken on outer package (Y) N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition (Y) N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/21/05 2000						
						Kathy Binkley	6-22-05

7802 948297 4548192-211

COC ID: COC-062105-1

Chain of Custody Record

WESTON SOLUTIONS

Client Kerr McGee

Site Name Moss American | Contact Name Tom Graan

W. O. 02687.007.006.0001 | Contact Phone No. 847-918-4142

Lab LANCASTER LABS | Lab Contact C. SWEIGART

TAT PER QUOTE | Lab Phone 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	SW846 8310-PAHS								
						Filtered								
						Container	1-L Amber							
						Preservative	N/A							
	MA3-FB-062005-3	G		N	6/20/2005 18:30	2								
	MA3-MW30S-062005-1	G		N	6/20/2005 18:05	2								
	MA3-MW35S-062105-5	G		N	6/21/2005 11:45	2								
	MA3-MW36S-062105-3	G		N	6/21/2005 09:30	2								
	MA3-MW5S-062005-2	G		N	6/20/2005 18:15	2								

Remarks/Comments

Sampled By

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5	6
2.3°	1.8°	4.7°	2.0°	5°	4.7°

COC Tape was present on outer package (Y) N

COC Tape was unbroken on outer package (Y) N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition (Y) N

Labels indicate Properly Preserved Y N

Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
	6/21/05 2000						
							6-22

7802 448297 4548192-211

COC ID: COC-062105-4

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT: PER QUOTE

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 350.2-NH3	EPA 365.3-ORTHO P, EPA 405.1-BOD	EPA 415.1-TOC	SW846 8310-PAHS	TKN, TP PO4,COD					
					Filtered										
					Container	1-L Glass	500-ml Poly	250 ml Glass	1-L Amber	1-L Glass					
					Preservative	N/A	N/A	N/A	N/A	N/A					
	MA3-FB-062105-13	G		N	6/21/2005 18:30				2						
	MA3-TG5-1-062105-10	G		N	6/21/2005 16:00	1	1	1		1					
	MA3-TG5-2-062105-11	G		N	6/21/2005 16:10	1	1	1		1					
	MA3-TG5-3-062105-12	G		N	6/21/2005 16:20	1	1	1		1					

Remarks/Comments

Sampled By: [signature]

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5	6
2.3°	1.8°	4.7°	2.0°	5.2°	4.7°

COC Tape was present on outer package (Y) N
COC Tape was unbroken on outer package (Y) N
COC Tape ws present on sample Y N
COC Tape was unbroken on sample Y N

Received in good condition (Y) N
Labels indicate Properly Preserved Y N
Received within Holding Time Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/21/2005						
						[signature]	6-22-05 855

7802 948297 4548192-211

COC ID: COC-062105-3

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.006.0001 | Contact Phone No.: 847-918-4142

Lab: LANCASTER LABS | Lab Contact: C. SWEIGART

TAT: PER QUOTE | Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	SW846 8310-PAHS								
						Filtered								
						Container	1-L Amber							
						Preservative	N/A							
	MA3-MW7S-062105-4	G		N	6/21/2005 11:40	2								
	MA3-MW7S-062105-4-DP	G		N	6/21/2005 11:40	2								
	MA3-TG5-1-062105-10	G		N	6/21/2005 16:00	2								
	MA3-TG5-2-062105-11	G		N	6/21/2005 16:10	2								
	MA3-TG5-3-062105-12	G		N	6/21/2005 16:20	2								

Remarks/Comments

Sampled By: [signature]

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5	6
2.3°	1.8°	4.7°	2.°	5°	4.7°

COC Tape was present on outer package: Y N

COC Tape was unbroken on outer package: Y N

COC Tape ws present on sample: Y N

COC Tape was unbroken on sample: Y N

Received in good condition: Y N

Labels indicate Properly Preserved: Y N

Received within Holding Time: Y N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/21/05 2000					Kathy Bunkley	6-22-05 0855

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

734-367-7900

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 948297. Samples arrived at the laboratory on Wednesday, June 22, 2005. The PO# for this group is ZAKW1KEOK0A90089.

Client Description		Lancaster Labs Number
MA3-MW29S-062105-2	Groundwater	4548192
MA3-MW29S-062105-2-MS	Groundwater	4548193
MA3-MW29S-062105-2-MSD	Groundwater	4548194
MA3-MW30S-062005-1	Groundwater	4548195
MA3-MW34S-062105-6	Groundwater	4548196
MA3-MW35S-062105-5	Groundwater	4548197
MA3-MW36S-062105-3	Groundwater	4548198
MA3-MW37S-062105-1	Groundwater	4548199
MA3-MW5S-062005-2	Groundwater	4548200
MA3-MW7S-062105-4	Groundwater	4548201
MA3-MW7S-062105-4-DP	Groundwater	4548202
MA3-FB-062005-3	Groundwater	4548203
MA3-FB-062105-13	Groundwater	4548204
MA3-TB-062105-14	Groundwater	4548205
MA3-TG5-1-062105-10	Groundwater	4548206
MA3-TG5-2-062105-11	Groundwater	4548207
MA3-TG5-3-062105-12	Groundwater	4548208
MA3-TG6-1-062105-9	Groundwater	4548209
MA3-TG6-2-062105-8	Groundwater	4548210
MA3-TG6-3-062105-7	Groundwater	4548211

METHODOLOGY

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

Lancaster Laboratories

1 COPY TO	Weston Solutions, Inc.	Attn: Tom Graan
1 COPY TO	Kerr-McGee Corporation	Attn: Roy Widmann
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
Carrie A Fleming at (717) 656-2300

Respectfully Submitted,

Rachel R. Cochis
Group Leader

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

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548192

MA3-MW29S-062105-2 Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA29S SDG#: KMA66-01BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.080	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.080	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.080	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 06:29	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 17:46	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 06:29	Linda C Pape	1

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548192

MA3-MW29S-062105-2 Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA29S SDG#: KMA66-01BKG

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield 1

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548193

MA3-MW29S-062105-2-MS Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA29S SDG#: KMA66-01MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	23.	0.2	ug/l	1
00777	Toluene	108-88-3	22.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	22.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	66.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	170.	1.7	ug/l	1
00782	Acenaphthylene	208-96-8	180.	1.7	ug/l	1
00783	Acenaphthene	83-32-9	180.	1.7	ug/l	1
00784	Fluorene	86-73-7	19.	0.52	ug/l	1
00785	Phenanthrene	85-01-8	5.9	0.083	ug/l	1
00789	Anthracene	120-12-7	2.9	0.042	ug/l	1
00807	Fluoranthene	206-44-0	2.9	0.042	ug/l	1
00811	Pyrene	129-00-0	19.	0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	1.5	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	1.2	0.042	ug/l	1
00823	Benzo(a)pyrene	50-32-8	1.4	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	3.0	0.042	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	5.7	0.083	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	11.	0.10	ug/l	1
07409	Chrysene	218-01-9	5.6	0.083	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	1.2	0.021	ug/l	1

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

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

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548193

MA3-MW29S-062105-2-MS Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA29S SDG#: KMA66-01MS

08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 07:01	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 18:25	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 07:01	Linda C Pape	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548194

MA3-MW29S-062105-2-MSD Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA29S SDG#: KMA66-01MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	22.	0.2	ug/l	1
00777	Toluene	108-88-3	21.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	22.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	65.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	180.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	180.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	180.	1.6	ug/l	1
00784	Fluorene	86-73-7	19.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	5.8	0.082	ug/l	1
00789	Anthracene	120-12-7	2.9	0.041	ug/l	1
00807	Fluoranthene	206-44-0	2.9	0.041	ug/l	1
00811	Pyrene	129-00-0	18.	0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	1.5	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	1.2	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	1.5	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	3.0	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	5.7	0.082	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	11.	0.10	ug/l	1
07409	Chrysene	218-01-9	5.6	0.082	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	1.2	0.021	ug/l	1

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

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

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548194

MA3-MW29S-062105-2-MSD Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA29S SDG#: KMA66-01MSD

08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 07:33	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 19:03	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 07:33	Linda C Pape	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548195

MA3-MW30S-062005-1 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/20/2005 18:05 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA30S SDG#: KMA66-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.082	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.082	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.082	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 08:04	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 20:21	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 08:04	Linda C Pape	1

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Lancaster Laboratories Sample No. WW 4548195

MA3-MW30S-062005-1 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/20/2005 18:05 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA30S SDG#: KMA66-02

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

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Lancaster Laboratories Sample No. WW 4548196

MA3-MW34S-062105-6 Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:50 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA34S SDG#: KMA66-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	6.0 J	4.0	ug/l	20
00777	Toluene	108-88-3	N.D.	4.0	ug/l	20
00778	Ethylbenzene	100-41-4	20. J	4.0	ug/l	20
00779	Total Xylenes	1330-20-7	62.	12.	ug/l	20
	Due to dilution of the sample made necessary by the high level of a non-target, normal reporting limits were not attained.					
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	7,600.	33.	ug/l	20
00782	Acenaphthylene	208-96-8	110. J	33.	ug/l	20
00783	Acenaphthene	83-32-9	790.	33.	ug/l	20
00784	Fluorene	86-73-7	640.	10.	ug/l	20
00785	Phenanthrene	85-01-8	1,500.	16.	ug/l	200
00789	Anthracene	120-12-7	160.	8.2	ug/l	200
00807	Fluoranthene	206-44-0	650.	8.2	ug/l	200
00811	Pyrene	129-00-0	540.	3.7	ug/l	20
00812	Benzo(a)anthracene	56-55-3	100.	4.1	ug/l	200
00818	Benzo(b)fluoranthene	205-99-2	36.	0.82	ug/l	20
00823	Benzo(a)pyrene	50-32-8	42.	0.41	ug/l	20
00895	Dibenz(a,h)anthracene	53-70-3	4.2	0.82	ug/l	20
00898	Indeno(1,2,3-cd)pyrene	193-39-5	20.	1.6	ug/l	20
00907	Benzo(g,h,i)perylene	191-24-2	16.	2.1	ug/l	20
07409	Chrysene	218-01-9	130.	1.6	ug/l	20
07410	Benzo(k)fluoranthene	207-08-9	22.	0.41	ug/l	20

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

Due to the sample matrix an initial dilution was necessary to perform the analysis. Therefore, the reporting limits for the PAH by HPLC compounds were raised.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

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Lancaster Laboratories Sample No. WW 4548196

MA3-MW34S-062105-6 Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:50 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA34S SDG#: KMA66-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 08:36	Linda C Pape	20
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 08:37	Mark A Clark	20
00774	PAH's in Water by HPLC	SW-846 8310	1	06/27/2005 10:04	Mark A Clark	200
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 08:36	Linda C Pape	20
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548197

MA3-MW35S-062105-5 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:45 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA35S SDG#: KMA66-04

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)						
00776	Benzene	71-43-2	N.D.		0.2	ug/l	1
00777	Toluene	108-88-3	N.D.		0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.		0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.		0.6	ug/l	1
00774	PAH's in Water by HPLC						
00775	Naphthalene	91-20-3	N.D.		1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.		1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.		1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.		0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.		0.080	ug/l	1
00789	Anthracene	120-12-7	N.D.		0.040	ug/l	1
00807	Fluoranthene	206-44-0	0.59		0.040	ug/l	1
00811	Pyrene	129-00-0	0.36	J	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	0.024	J	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.		0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.		0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.		0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.080	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.		0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.		0.080	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.		0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 09:08	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 20:59	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 09:08	Linda C Pape	1

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Lancaster Laboratories Sample No. WW 4548197

MA3-MW35S-062105-5 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:45 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA35S SDG#: KMA66-04

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

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Lancaster Laboratories Sample No. WW 4548198

MA3-MW36S-062105-3 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA36S SDG#: KMA66-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 09:40	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 21:38	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 09:40	Linda C Pape	1

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Lancaster Laboratories Sample No. WW 4548198

MA3-MW36S-062105-3 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA36S SDG#: KMA66-05

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

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Lancaster Laboratories Sample No. WW 4548199

MA3-MW37S-062105-1 Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:15 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA37S SDG#: KMA66-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.49	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.039	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.039	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.039	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.098	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 10:12	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 22:16	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 10:12	Linda C Pape	1

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Lancaster Laboratories Sample No. WW 4548199

MA3-MW37S-062105-1 Groundwater
062105-2,5 02687.007.006.0001
Moss American
Collected:06/21/2005 09:15 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA37S SDG#: KMA66-06

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

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Lancaster Laboratories Sample No. WW 4548200

MA3-MW5S-062005-2 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/20/2005 18:15 by MP Account Number: 07802

Submitted: 06/22/2005 08:55 Kerr-McGee Corporation
Reported: 07/06/2005 at 15:39 PO Box 3048
Discard: 09/05/2005 Livonia MI 48150

MA05S SDG#: KMA66-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.080	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.080	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.080	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 10:45	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/25/2005 23:33	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 10:45	Linda C Pape	1

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Lancaster Laboratories Sample No. WW 4548200

MA3-MW5S-062005-2 Groundwater
062105-1,5 02687.007.006.0001
Moss American
Collected:06/20/2005 18:15 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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MA05S SDG#: KMA66-07

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

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Lancaster Laboratories Sample No. WW 4548201

MA3-MW7S-062105-4 Groundwater
062105-3,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:40 by MP Account Number: 07802

Submitted: 06/22/2005 08:55 Kerr-McGee Corporation
Reported: 07/06/2005 at 15:39 PO Box 3048
Discard: 09/05/2005 Livonia MI 48150

MA07S SDG#: KMA66-08

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)						
00776	Benzene	71-43-2	1.6	J	1.0	ug/l	5
00777	Toluene	108-88-3	N.D.		1.0	ug/l	5
00778	Ethylbenzene	100-41-4	11.		1.0	ug/l	5
00779	Total Xylenes	1330-20-7	19.		3.0	ug/l	5
	Due to dilution of the sample made necessary by the high level of a non-target, normal reporting limits were not attained.						
00774	PAH's in Water by HPLC						
00775	Naphthalene	91-20-3	1,700.		33.	ug/l	20
00782	Acenaphthylene	208-96-8	30.		1.6	ug/l	1
00783	Acenaphthene	83-32-9	36.		1.6	ug/l	1
00784	Fluorene	86-73-7	6.3		0.51	ug/l	1
00785	Phenanthrene	85-01-8	0.17	J	0.082	ug/l	1
00789	Anthracene	120-12-7	N.D.		0.041	ug/l	1
00807	Fluoranthene	206-44-0	0.076	J	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.		0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	0.034	J	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.		0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	0.024	J	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.		0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.082	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.		0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.		0.082	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.		0.021	ug/l	1
	Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.						

State of Wisconsin Lab Certification No. EN 748

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548201

MA3-MW7S-062105-4 Groundwater
062105-3,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:40 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:39
Discard: 09/05/2005

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Livonia MI 48150

MA07S SDG#: KMA66-08

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 12:21	Linda C Pape	5
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 00:12	Mark A Clark	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/27/2005 08:39	Mark A Clark	20
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 12:21	Linda C Pape	5
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548202

MA3-MW7S-062105-4-DP Groundwater
062105-3,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:40 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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MA07D SDG#: KMA66-09FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	1.6 J	1.0	ug/l	5
00777	Toluene	108-88-3	N.D.	1.0	ug/l	5
00778	Ethylbenzene	100-41-4	11.	1.0	ug/l	5
00779	Total Xylenes	1330-20-7	18.	3.0	ug/l	5
	Due to dilution of the sample made necessary by the high level of a non-target, normal reporting limits were not attained.					
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	2,000.	33.	ug/l	20
00782	Acenaphthylene	208-96-8	31.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	35.	1.6	ug/l	1
00784	Fluorene	86-73-7	5.8	0.51	ug/l	1
00785	Phenanthrene	85-01-8	0.11 J	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

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Laboratory Chronicle

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548202

MA3-MW7S-062105-4-DP Groundwater
062105-3,5 02687.007.006.0001
Moss American
Collected:06/21/2005 11:40 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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MA07D SDG#: KMA66-09FD

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 12:53	Linda C Pape	5
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 00:51	Mark A Clark	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/27/2005 09:22	Mark A Clark	20
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 12:53	Linda C Pape	5
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548203

MA3-FB-062005-3 Groundwater
062105-1 02687.007.006.0001
Moss American
Collected:06/20/2005 18:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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PO Box 3048
Livonia MI 48150

MAF20 SDG#: KMA66-10B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 13:25	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 01:29	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 13:25	Linda C Pape	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548203

MA3-FB-062005-3 **Groundwater**
062105-1 **02687.007.006.0001**
Moss American
Collected:06/20/2005 18:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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MAF20 SDG#: KMA66-10B

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

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Lancaster Laboratories Sample No. WW 4548204

MA3-FB-062105-13 **Groundwater**
062105-4 **02687.007.006.0001**
Moss American
Collected:06/21/2005 18:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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MAF21 SDG#: KMA66-11FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.49	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.078	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.039	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.039	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.039	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.078	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.098	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.078	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 13:58	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 02:08	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 13:58	Linda C Pape	1

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Lancaster Laboratories Sample No. WW 4548204

MA3-FB-062105-13 Groundwater
062105-4 02687.007.006.0001
Moss American
Collected:06/21/2005 18:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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Livonia MI 48150

MAF21 SDG#: KMA66-11FB

03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1

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Lancaster Laboratories Sample No. WW 4548205

MA3-TB-062105-14 **Groundwater**
062105-5 **02687.007.006.0001**
Moss American
Collected: n.a.

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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MTB14 SDG#: KMA66-12TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 05:57	Linda C Pape	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 05:57	Linda C Pape	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548206

MA3-TG5-1-062105-10 Groundwater
062105-3,4,5 02687.007.006.0001
Moss American
Collected:06/21/2005 16:00 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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MTG51 SDG#: KMA66-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	0.51 J	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	N.D.	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	1.6	mg/l	1
00273	Total Organic Carbon	n.a.	4.6	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	10.9	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548206

MA3-TG5-1-062105-10 Groundwater
062105-3,4,5 02687.007.006.0001
Moss American
Collected:06/21/2005 16:00 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG51 SDG#: KMA66-13

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/24/2005 10:31	Nicole M Kepley	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/22/2005 21:24	Venia B McFadden	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/28/2005 19:20	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/23/2005 15:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/23/2005 02:10	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/22/2005 22:39	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/25/2005 11:41	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 09:26	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 14:30	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 02:46	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 14:30	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/23/2005 14:10	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/22/2005 18:20	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548207

MA3-TG5-2-062105-11 Groundwater
062105-3,4,5 02687.007.006.0001
Moss American
Collected:06/21/2005 16:10 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
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MTG52 SDG#: KMA66-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	0.88 J	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	N.D.	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	1.8	mg/l	1
00273	Total Organic Carbon	n.a.	6.8	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	14.8	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	0.066 J	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548207

MA3-TG5-2-062105-11 Groundwater
062105-3,4,5 02687.007.006.0001
Moss American
Collected:06/21/2005 16:10 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

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MTG52 SDG#: KMA66-14

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/24/2005 10:32	Nicole M Kepley	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/22/2005 21:28	Venia B McFadden	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/28/2005 19:21	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/23/2005 15:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/23/2005 02:10	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/22/2005 22:39	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/25/2005 12:05	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 09:30	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 15:02	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 03:25	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 15:02	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/23/2005 14:10	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/22/2005 18:20	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548208

MA3-TG5-3-062105-12 Groundwater
062105-3,4,5 02687.007.006.0001
Moss American
Collected:06/21/2005 16:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG53 SDG#: KMA66-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	0.92 J	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.71	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	1.7	mg/l	1
00273	Total Organic Carbon	n.a.	6.5	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	14.1	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	0.053 J	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548208

MA3-TG5-3-062105-12 Groundwater
062105-3,4,5 02687.007.006.0001
Moss American
Collected:06/21/2005 16:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG53 SDG#: KMA66-15

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/24/2005 10:33	Nicole M Kepley	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/22/2005 21:29	Venia B McFadden	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/28/2005 19:22	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/23/2005 15:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/23/2005 02:10	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/22/2005 22:39	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/25/2005 12:13	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 09:31	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 15:34	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 04:03	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 15:34	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/23/2005 14:10	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/22/2005 18:20	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548209

MA3-TG6-1-062105-9 Groundwater
062105-5,6 02687.007.006.0001
Moss American
Collected:06/21/2005 14:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG61 SDG#: KMA66-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.8	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	1.7	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	0.016 J	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	4.2	mg/l	1
00273	Total Organic Carbon	n.a.	11.1	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	23.4	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548209

MA3-TG6-1-062105-9 Groundwater
062105-5,6 02687.007.006.0001
Moss American
Collected:06/21/2005 14:30 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG61 SDG#: KMA66-16

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/24/2005 10:34	Nicole M Kepley	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/22/2005 21:33	Venia B McFadden	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/28/2005 19:26	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/23/2005 15:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/23/2005 02:10	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/22/2005 22:39	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/25/2005 12:22	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 09:32	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 16:06	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 04:42	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 16:06	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/23/2005 14:10	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/22/2005 18:20	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548210

MA3-TG6-2-062105-8 Groundwater
062105-5,6 02687.007.006.0001
Moss American
Collected:06/21/2005 14:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG62 SDG#: KMA66-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.2	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.90	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	1.5	mg/l	1
00273	Total Organic Carbon	n.a.	9.0	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	18.0	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	0.071 J	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548210

MA3-TG6-2-062105-8 Groundwater
062105-5,6 02687.007.006.0001
Moss American
Collected:06/21/2005 14:20 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG62 SDG#: KMA66-17

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/24/2005 10:36	Nicole M Kepley	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/22/2005 21:37	Venia B McFadden	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/28/2005 19:27	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/23/2005 15:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/23/2005 02:10	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/22/2005 22:39	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/25/2005 12:30	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 09:33	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 16:38	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 05:21	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 16:38	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/23/2005 14:10	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/22/2005 18:20	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548211

MA3-TG6-3-062105-7 Groundwater
062105-5,6 02687.007.006.0001
Moss American
Collected:06/21/2005 14:15 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG63 SDG#: KMA66-18*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.7	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.87	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	1.3	mg/l	1
00273	Total Organic Carbon	n.a.	9.6	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	21.1	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.7	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.7	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.7	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.53	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.084	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.042	ug/l	1
00807	Fluoranthene	206-44-0	0.050 J	0.042	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.042	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.042	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.084	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.084	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.021	ug/l	1

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4548211

MA3-TG6-3-062105-7 Groundwater
062105-5,6 02687.007.006.0001
Moss American
Collected:06/21/2005 14:15 by MP

Account Number: 07802

Submitted: 06/22/2005 08:55
Reported: 07/06/2005 at 15:40
Discard: 09/05/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG63 SDG#: KMA66-18*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/24/2005 10:37	Nicole M Kepley	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/22/2005 21:38	Venia B McFadden	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/28/2005 19:31	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/23/2005 15:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/23/2005 02:10	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/22/2005 22:39	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/25/2005 12:38	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 09:35	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/23/2005 17:10	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 06:38	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/23/2005 17:10	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/23/2005 14:10	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/23/2005 16:00	Kerrie A Greenfield	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/22/2005 18:20	Nancy J Shoop	1

Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/06/05 at 03:40 PM

Group Number: 948297

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 05173023501A	Sample number(s): 4548206-4548211							
Biochemical Oxygen Demand				108	105	85-115	2	8
Batch number: 05173105101A	Sample number(s): 4548206-4548208							
Nitrite Nitrogen	N.D.	0.015	mg/l	101		90-110		
Batch number: 05173105101B	Sample number(s): 4548209-4548211							
Nitrite Nitrogen	N.D.	0.015	mg/l	101		90-110		
Batch number: 05173110101A	Sample number(s): 4548206-4548211							
Total Phosphorus as PO4 water	N.D.	0.25	mg/l	99		89-110		
Batch number: 05174022101A	Sample number(s): 4548206-4548211							
Ammonia Nitrogen	N.D.	0.11	mg/l	97		91-100		
Batch number: 05174022601A	Sample number(s): 4548206-4548211							
Ortho-Phosphate as P	N.D.	0.010	mg/l	100		95-105		
Batch number: 05174108101A	Sample number(s): 4548206-4548210							
Kjeldahl Nitrogen	N.D.	0.50	mg/l	104		90-110		
Batch number: 05174108101B	Sample number(s): 4548211							
Kjeldahl Nitrogen	N.D.	0.50	mg/l	104		90-110		
Batch number: 05174A53A	Sample number(s): 4548192-4548211							
Benzene	N.D.	0.2	ug/l	108	110	86-119	2	30
Toluene	N.D.	0.2	ug/l	103	105	82-119	3	30
Ethylbenzene	N.D.	0.2	ug/l	103	106	81-119	3	30
Total Xylenes	N.D.	0.6	ug/l	103	105	82-120	2	30
Batch number: 05174WAD026	Sample number(s): 4548192-4548204,4548206-4548211							
Naphthalene	N.D.	1.6	ug/l	86		57-109		
Acenaphthylene	N.D.	1.6	ug/l	90		67-99		
Acenaphthene	N.D.	1.6	ug/l	92		60-116		
Fluorene	N.D.	0.50	ug/l	95		61-116		
Phenanthrene	N.D.	0.080	ug/l	98		67-115		
Anthracene	N.D.	0.040	ug/l	95		68-113		

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

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

Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948297
Reported: 07/06/05 at 03:40 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Fluoranthene	N.D.	0.040	ug/l	96		70-112		
Pyrene	N.D.	0.18	ug/l	92		69-113		
Benzo(a)anthracene	N.D.	0.020	ug/l	98		73-114		
Benzo(b)fluoranthene	N.D.	0.040	ug/l	97		72-113		
Benzo(a)pyrene	N.D.	0.020	ug/l	91		68-112		
Dibenz(a,h)anthracene	N.D.	0.040	ug/l	79		19-129		
Indeno(1,2,3-cd)pyrene	N.D.	0.080	ug/l	82		67-106		
Benzo(g,h,i)perylene	N.D.	0.10	ug/l	69		7-126		
Chrysene	N.D.	0.080	ug/l	93		70-111		
Benzo(k)fluoranthene	N.D.	0.020	ug/l	97		72-119		
Batch number: 05175150511A	Sample number(s): 4548206							
Total Organic Carbon	N.D.	0.50	mg/l	102		83-115		
Batch number: 05175150511B	Sample number(s): 4548207-4548211							
Total Organic Carbon	N.D.	0.50	mg/l	102		83-115		
Batch number: 05179106102A	Sample number(s): 4548206-4548210							
Nitrate Nitrogen	N.D.	0.040	mg/l	99		89-110		
Batch number: 05179106102B	Sample number(s): 4548211							
Nitrate Nitrogen	N.D.	0.040	mg/l	99		89-110		
Batch number: 05179155301A	Sample number(s): 4548206-4548211							
Chemical Oxygen Demand				96		87-102		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05173023501A	Sample number(s): 4548206-4548211								
Biochemical Oxygen Demand	103	104	67-144	1	9	2,990.	3,010.	1	9
Batch number: 05173105101A	Sample number(s): 4548206-4548208								
Nitrite Nitrogen	100		90-110			N.D.	N.D.	0 (1)	20
Batch number: 05173105101B	Sample number(s): 4548209-4548211								
Nitrite Nitrogen	105		90-110			N.D.	N.D.	31* (1)	20
Batch number: 05173110101A	Sample number(s): 4548206-4548211								
Total Phosphorus as PO4 water	99		90-110			N.D.	N.D.	0 (1)	3
Batch number: 05174022101A	Sample number(s): 4548206-4548211								
Ammonia Nitrogen	(2)	(2)	64-128	1	8	129,000.	130,000.	1	2

*- Outside of specification
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(2) The background result was more than four times the spike added.

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Lancaster, PA 17605-2425
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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948297
Reported: 07/06/05 at 03:40 PM

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05174022601A	Sample number(s): 4548206-4548211								
Ortho-Phosphate as P	99	98	88-113	1	5	N.D.	N.D.	200* (1)	8
Batch number: 05174108101A	Sample number(s): 4548206-4548210								
Kjeldahl Nitrogen	109		90-110			1.3	1.4	7 (1)	7
Batch number: 05174108101B	Sample number(s): 4548211								
Kjeldahl Nitrogen	99		90-110			1.7	1.6	6 (1)	7
Batch number: 05174A53A	Sample number(s): 4548192-4548211								
Benzene	114	112	78-131	2	30				
Toluene	109	107	78-129	2	30				
Ethylbenzene	110	109	75-133	2	30				
Total Xylenes	110	108	78-130	2	30				
Batch number: 05174WAD026	Sample number(s): 4548192-4548204,4548206-4548211								
Naphthalene	82	86	54-112	4	30				
Acenaphthylene	85	87	63-104	1	30				
Acenaphthene	88	90	59-114	1	30				
Fluorene	91	92	71-99	1	30				
Phenanthrene	94	95	66-115	0	30				
Anthracene	91	92	68-104	0	30				
Fluoranthene	92	93	67-104	0	30				
Pyrene	89	89	66-106	1	30				
Benzo(a)anthracene	93	95	63-111	0	30				
Benzo(b)fluoranthene	93	95	71-106	0	30				
Benzo(a)pyrene	91	94	69-109	2	30				
Dibenz(a,h)anthracene	95	96	35-129	1	30				
Indeno(1,2,3-cd)pyrene	92	92	56-112	1	30				
Benzo(g,h,i)perylene	91	91	35-126	1	30				
Chrysene	89	90	60-107	0	30				
Benzo(k)fluoranthene	94	96	70-109	1	30				
Batch number: 05175150511A	Sample number(s): 4548206								
Total Organic Carbon	104		67-130			4.6	4.7	2 (1)	4
Batch number: 05175150511B	Sample number(s): 4548207-4548211								
Total Organic Carbon	104		67-130			3.9	4.2	6* (1)	4
Batch number: 05179106102A	Sample number(s): 4548206-4548210								
Nitrate Nitrogen	96		90-110			N.D.	N.D.	0 (1)	2
Batch number: 05179106102B	Sample number(s): 4548211								
Nitrate Nitrogen	99		90-110			N.D.	N.D.	0 (1)	2
Batch number: 05179155301A	Sample number(s): 4548206-4548211								

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

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Lancaster, PA 17605-2425
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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948297
Reported: 07/06/05 at 03:40 PM

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Chemical Oxygen Demand	63	64	60-129	1	5	32.4	27.3	17* (1)	8

Surrogate Quality Control

Analysis Name: BTEX (8021)
Batch number: 05174A53A

	Trifluorotoluene-P
4548192	102
4548193	102
4548194	100
4548195	99
4548196	99
4548197	100
4548198	101
4548199	102
4548200	102
4548201	100
4548202	99
4548203	103
4548204	103
4548205	103
4548206	103
4548207	102
4548208	103
4548209	101
4548210	102
4548211	102
Blank	100
LCS	102
LCSD	101
MS	102
MSD	100
Limits:	69-137

Analysis Name: PAH's in Water by HPLC
Batch number: 05174WAD026

	Nitrobenzene	Triphenylene
4548192	110	94
4548193	92	98
4548194	104	99
4548195	108	101

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

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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948297
Reported: 07/06/05 at 03:40 PM

Surrogate Quality Control

4548196	112	11683*
4548197	109	100
4548198	113	99
4548199	115	98
4548200	106	92
4548201	139	106
4548202	140	98
4548203	113	99
4548204	102	92
4548206	106	96
4548207	111	97
4548208	107	97
4548209	104	96
4548210	106	94
4548211	111	97
Blank	110	96
LCS	105	104
MS	92	98
MSD	104	99
Limits:	63-154	55-130

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

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

Kerr-McGee
Moss American site
Milwaukee, Wisconsin
SDG# KMA67

water samples – BTEX (8021B)

1. Holding Times:

Lab ID	Client ID	Sample Date	Analysis Date
	MA3-		
4549173	FB-06	6/22/05	6/24/05
4549174	MW28S-	6/22/05	6/24/05
4549175	MW28S-MS	6/22/05	6/25/05
4549176	MW28S-MSD	6/22/05	6/25/05
4549177	MW31S	6/22/05	6/24/05
4549178	MW6S	6/22/05	6/25/05
4549179	TB-06	6/22/05	6/24/05
4549180	TG1-1	6/22/05	6/25/05
4549181	TG1-2	6/22/05	6/25/05
4549182	TG1-3	6/22/05	6/25/05
4549183	TG2-1	6/22/05	6/25/05
4549184	TG2-2	6/22/05	6/25/05
4549185	TG2-3	6/22/05	6/25/05
4549186	TG4-1	6/22/05	6/27/05
4549187	TG4-1 DP	6/22/05	6/27/05
4549188	TG4-2	6/22/05	6/27/05
4549189	TG4-3	6/22/05	6/27/05

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

2. Method Blank:

Two method blanks were associated with the BTEX samples (BLK5315, BLK5316). The blank result was 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 required QC limits.

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

Sample MW29S was the MS/MSD. All recoveries were acceptable.

6. Laboratory Control Sample:

All laboratory control sample results were acceptable.

7. Trip Blanks:

One trip blank was associated with the samples. All trip blank results were non-detect. All results are acceptable.

8. Field Blanks:

One field blank was associated with the samples. All BTEX results were non-detect. All results are acceptable.

9. Field Duplicates:

Samples MW7SDP/MS7S are field duplicates. All results were non-detect.

10. Other

Several samples required dilutions. No qualifications are required.

Water Samples – Polynuclear Aromatic Hydrocarbons (PAHs by HPLC)

1. Holding Times:

Lab ID	Client ID	Sample Date	Extraction Date	Analysis Date
4549173	FB-06	6/22/05	6/24/05	6/26/05
4549174	MW28S-	6/22/05	6/24/05	6/26/05
4549175	MW28S-MS	6/22/05	6/24/05	6/26/05
4549176	MW28S-MSD	6/22/05	6/24/05	6/26/05
4549177	MW31S	6/22/05	6/24/05	6/26/05
4549178	MW6S	6/22/05	6/24/05	6/26/05
4549180	TG1-1	6/22/05	6/24/05	6/27/05
4549181	TG1-2	6/22/05	6/24/05	6/26/05
4549182	TG1-3	6/22/05	6/24/05	6/26/05
4549183	TG2-1	6/22/05	6/24/05	6/26/05
4549184	TG2-2	6/22/05	6/24/05	6/26/05
4549185	TG2-3	6/22/05	6/24/05	6/26/05
4549186	TG4-1	6/22/05	6/24/05	6/26/05
4549187	TG4-1 DP	6/22/05	6/24/05	6/26/05
4549188	TG4-2	6/22/05	6/24/05	6/26/05
4549189	TG4-3	6/22/05	6/24/05	6/26/05
4548210	TG6-2	6/21/05	6/24/05	6/26/05
4548211	TG6-3	6/21/05	6/24/05	6/26/05

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

2. Method Blank:

One method blank was associated with the samples (SBLKWG174). The method blanks were free of contamination.

3. Initial and Continuing Calibration:

Calibration results were acceptable.

4. Surrogate Recovery:

Two surrogates were used for two different detector columns. All surrogate recoveries were within required control limits.

5. Matrix Spike/Matrix Spike Duplicate:

Sample MW28S was run as a MS/MSD and associated with the remaining samples. All recoveries were acceptable.

6. Laboratory Control Sample:

One LCS was associated with the samples. All LCS recoveries were within required control limits.

7. Field Blanks:

One field blank was associated with the samples. The field blank results were non-detect.

8. Field Duplicates:

Samples TG4-1 and TG4-1DP are field duplicates. All results were non-detect.

9. Other

Samples TG1-1 required 10 and 100 times dilutions.

Data reviewed by: T. Balla Date: 8/9/05

7802 448502 4549173-84

COC ID: COC-062205-6

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT: PER QUOTE

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 350.2-NH3	EPA 353.2-NO2	EPA 353.2-NO3	EPA 365.3-ORTHO P, EPA 405.1-BOD	SW846 8021B-BTEX	TKN, TP PO4,COD				
					Filtered										
					Container	1-L Glass	40 ml Vials	40 ml Vials	500-ml Poly	40 ml Vials	1-L Glass				
					Preservative	N/A	N/A	H2SO4	N/A	HCl	N/A				
	MA3-FB-062205-16	G		N	6/22/2005 18:00					3					
	MA3-MW28S-062205-12	G		N	6/22/2005 16:10					3					
	MA3-MW28S-062205-12-MSD	G		Y	6/22/2005 16:10					6					
	MA3-MW31S-062205-9	G		N	6/22/2005 14:50					3					
	MA3-MW6S-062205-8	G		N	6/22/2005 14:40					3					
	MA3-TB-062205-17	G		N	6/22/2005 18:10					3					
	MA3-TG1-1-062205-15	G		N	6/22/2005 17:50		1	1	1	3					
	MA3-TG1-2-062205-14	G		N	6/22/2005 17:40		1	1	1	3					
	MA3-TG1-3-062205-13	G		N	6/22/2005 17:30		1	1	1	3					
	MA3-TG2-1-062205-7	G		N	6/22/2005 14:30		1	1	1	3					
	MA3-TG2-2-062205-10	G		N	6/22/2005 15:50		1	1	1	3					
	MA3-TG2-3-062205-11	G		N	6/22/2005 16:00	1	1	1	1	3	1				
	MA3-TG4-1-062205-1	G		N	6/22/2005 08:50		1	1	1	3					
	MA3-TG4-2-062205-2	G		N	6/22/2005 09:00		1	1	1	3					
	MA3-TG4-3-062205-3	G		N	6/22/2005 09:10		1	1	1	3					

RECEIVED JUL 15 2005

Cooler 6

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C

1	2 2.7	3	4	5

COC Tape was present on outer package (Y) N
COC Tape was unbroken on outer package (Y) N
COC Tape ws present on sample Y N NA
COC Tape was unbroken on sample Y N

Received in good condition (Y) N
Labels indicate Properly Preserved (Y) N
Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/22/05 2000					[signature]	6/23/05 0845

Sampled By [signature]

7802 948502 4549173-89

COC ID: COC-062205-2

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT: PER QUOTE

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 415.1-TOC	SW846 8310-PAHS								
						Filtered									
						Container	250 ml Glass	1-L Amber							
						Preservative	N/A	N/A							
	MA3-MW28S-062205-12	G		N	6/22/2005 16:10		2								
	MA3-MW28S-062205-12-MSD	G		Y	6/22/2005 16:10		4								
	MA3-MW31S-062205-9	G		N	6/22/2005 14:50		2								
	MA3-TG1-1-062205-15	G		N	6/22/2005 17:50	1									
	MA3-TG1-2-062205-14	G		N	6/22/2005 17:40	1									
	MA3-TG1-3-062205-13	G		N	6/22/2005 17:30	1									
	MA3-TG2-1-062205-7	G		N	6/22/2005 14:30	1									
	MA3-TG2-2-062205-10	G		N	6/22/2005 15:50	1									
	MA3-TG2-3-062205-11	G		N	6/22/2005 16:00	1									
	MA3-TG4-1-062205-1	G		N	6/22/2005 08:50	1									
	MA3-TG4-2-062205-2	G		N	6/22/2005 09:00	1									
	MA3-TG4-3-062205-3	G		N	6/22/2005 09:10	1									

Cooler 1

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
		3.2		

COC Tape was present on outer package (Y) N
COC Tape was unbroken on outer package (Y) N
COC Tape ws present on sample Y N NA
COC Tape was unbroken on sample Y N

Received in good condition (Y) N
Labels indicate Properly Preserved (Y) N
Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
	6/22/05 2000						
							6/23/05 0845

Sampled By

7802 948502 4544173-89

COC ID: COC-062205-1

Chain of Custody Record

WESTON SOLUTIONS

Client : Kerr McGee

Site Name Moss American | Contact Name Tom Graan

W. O. 02687.007.006.0001 | Contact Phone No. 847-918-4142

Lab LANCASTER LABS | Lab Contact C. SWEIGART

TAT PER QUOTE | Lab Phone 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	SW846 8310-PAHS									
						Filtered									
						Container	1-L Amber								
						Preservative	N/A								
	MA3-FB-062205-16	G		N	6/22/2005 18:00	2									
	MA3-TG2-1-062205-7	G		N	6/22/2005 14:30	2									
	MA3-TG4-1-062205-1	G		N	6/22/2005 08:50	2									
	MA3-TG4-2-062205-2	G		N	6/22/2005 09:00	2									
	MA3-TG4-3-062205-3	G		N	6/22/2005 09:10	2									

Cooler 2

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
		3.0		

COC Tape was present on outer package (Y) N

COC Tape was unbroken on outer package (Y) N

COC Tape ws present on sample Y N NA

COC Tape was unbroken on sample Y N

Received in good condition (Y) N

Labels indicate Properly Preserved (Y) N

Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
	6/22/05 2000						

Sampled By

6/23/05 0815

7802 948502 4549173-89

COC ID: COC-062205-4

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.006.0001 | Contact Phone No.: 847-918-4142

Lab: LANCASTER LABS | Lab Contact: C. SWEIGART

TAT: PER QUOTE | Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	SW846 8310-PAHS								
						Filtered								
						Container	1-L Amber							
						Preservative	N/A							
	MA3-TG1-1-062205-15	G		N	6/22/2005 17:50	2								
	MA3-TG1-2-062205-14	G		N	6/22/2005 17:40	2								
	MA3-TG1-3-062205-13	G		N	6/22/2005 17:30	2								
	MA3-TG2-2-062205-10	G		N	6/22/2005 15:50	2								
	MA3-TG2-3-062205-11	G		N	6/22/2005 16:00	2								

Cooler 3

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
		3.7		

COC Tape was present on outer package (Y) N

COC Tape was unbroken on outer package (Y) N

COC Tape ws present on sample Y N N/A

COC Tape was unbroken on sample Y N

Received in good condition (Y) N

Labels indicate Properly Preserved (Y) N

Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
	6/22/05 2000						
							6/23/05 0840

Sampled By

78vo 5705Cu 049 -8.

COC ID: COC-062205-5

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT: PER QUOTE

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 350.2-NH3	SW846 8310-PAHS	TKN, TP PO4,COD
					Filtered			
					Container	1-L Glass	1-L Amber	1-L Glass
					Preservative	N/A	N/A	N/A
	MA3-MW6S-062205-8	G		N	6/22/2005 14:40		2	
	MA3-TG1-3-062205-13	G		N	6/22/2005 17:30	1		1
	MA3-TG2-1-062205-7	G		N	6/22/2005 14:30	1		1
	MA3-TG2-2-062205-10	G		N	6/22/2005 15:50	1		1
	MA3-TG4-1-062205-1-DP	G		N	6/22/2005 08:50		2	

Cooler 4

Remarks/Comments

Sampled By: N. Pihl

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
	2.0			

COC Tape was present on outer package (Y) N
COC Tape was unbroken on outer package (Y) N
COC Tape ws present on sample Y N NA
COC Tape was unbroken on sample Y N

Received in good condition (Y) N
Labels indicate Properly Preserved (Y) N
Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
Narissa Pihl	6/22/05 2000					Ross [illegible]	6/23/05 0845

7802 948502 4549173-89

COC ID: COC-062205-3

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.006.0001 | Contact Phone No.: 847-918-4142

Lab: LANCASTER LABS | Lab Contact: C. SWEIGART

TAT: PER QUOTE | Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 350.2-NH3	TKN, TP PO4,COD								
						Filtered									
						Container	1-L Glass	1-L Glass							
						Preservative	N/A	N/A							
	MA3-TG1-1-062205-15	G		N	6/22/2005 17:50	1	1								
	MA3-TG1-2-062205-14	G		N	6/22/2005 17:40	1	1								
	MA3-TG4-1-062205-1	G		N	6/22/2005 08:50	1	1								
	MA3-TG4-2-062205-2	G		N	6/22/2005 09:00	1	1								
	MA3-TG4-3-062205-3	G		N	6/22/2005 09:10	1	1								

Cooler 5

Remarks/Comments

Sampled By M.P.M

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
		3.4		

COC Tape was present on outer package (Y) N

COC Tape was unbroken on outer package (Y) N

COC Tape ws present on sample Y N NA

COC Tape was unbroken on sample Y N

Received in good condition (Y) N

Labels indicate Properly Preserved (Y) N

Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
[signature]	6/22/05 2200					[signature]	6/23/05 0845

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

734-367-7900

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 948502. Samples arrived at the laboratory on Thursday, June 23, 2005. The PO# for this group is ZAKW1KEOK0A90089.

Client Description		Lancaster Labs Number
MA3-FB-062205-16	Groundwater	4549173
MA3-MW28S-062205-12	Groundwater	4549174
MA3-MW28S-062205-12-MS	Groundwater	4549175
MA3-MW28S-062205-12-MSD	Groundwater	4549176
MA3-MW31S-062205-9	Groundwater	4549177
MA3-MW6S-062205-8	Groundwater	4549178
MA3-TB-062205-17	Groundwater	4549179
MA3-TG1-1-062205-15	Groundwater	4549180
MA3-TG1-2-062205-14	Groundwater	4549181
MA3-TG1-3-062205-13	Groundwater	4549182
MA3-TG2-1-062205-7	Groundwater	4549183
MA3-TG2-2-062205-10	Groundwater	4549184
MA3-TG2-3-062205-11	Groundwater	4549185
MA3-TG4-1-062205-1	Groundwater	4549186
MA3-TG4-1-062205-1-DP	Groundwater	4549187
MA3-TG4-2-062205-2	Groundwater	4549188
MA3-TG4-3-062205-3	Groundwater	4549189

METHODOLOGY

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

1 COPY TO	Weston Solutions, Inc.	Attn: Tom Graan
1 COPY TO	Kerr-McGee Corporation	Attn: Roy Widmann
1 COPY TO	Data Package Group	

Lancaster Laboratories

Questions? Contact your Client Services Representative
Carrie A Fleming at (717) 656-2300

Respectfully Submitted,

Michele J. Smith
Group Leader

MEMBER ACIL
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717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549173

MA3-FB-062205-16 Groundwater
062205-1,6 02687.007.006.0001
Moss American
Collected:06/22/2005 18:00 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MFB22 SDG#: KMA67-01FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.080	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.080	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.080	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/24/2005 21:11	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 15:42	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/24/2005 21:11	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549173

MA3-FB-062205-16 Groundwater
062205-1,6 02687.007.006.0001
Moss American
Collected:06/22/2005 18:00 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MFB22 SDG#: KMA67-01FB

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2425 New Holland Pike
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717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549174

MA3-MW28S-062205-12 Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA28S SDG#: KMA67-02BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/24/2005 22:15	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 12:29	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/24/2005 22:15	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549174

MA3-MW28S-062205-12 Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA28S SDG#: KMA67-02BKG

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549175

MA3-MW28S-062205-12-MS Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA28S SDG#: KMA67-02MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	23.	0.2	ug/l	1
00777	Toluene	108-88-3	22.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	22.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	65.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	170.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	170.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	180.	1.6	ug/l	1
00784	Fluorene	86-73-7	18.	0.49	ug/l	1
00785	Phenanthrene	85-01-8	5.6	0.079	ug/l	1
00789	Anthracene	120-12-7	2.8	0.039	ug/l	1
00807	Fluoranthene	206-44-0	2.8	0.039	ug/l	1
00811	Pyrene	129-00-0	18.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	1.4	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	1.1	0.039	ug/l	1
00823	Benzo(a)pyrene	50-32-8	1.5	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	2.9	0.039	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	5.6	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	11.	0.098	ug/l	1
07409	Chrysene	218-01-9	5.4	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	1.1	0.020	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 02:33	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 13:07	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 02:33	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549175

MA3-MW28S-062205-12-MS Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA28S SDG#: KMA67-02MS

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549176

MA3-MW28S-062205-12-MSD Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA28S SDG#: KMA67-02MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	23.	0.2	ug/l	1
00777	Toluene	108-88-3	22.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	22.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	65.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	180.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	180.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	180.	1.6	ug/l	1
00784	Fluorene	86-73-7	19.	0.52	ug/l	1
00785	Phenanthrene	85-01-8	5.8	0.082	ug/l	1
00789	Anthracene	120-12-7	2.9	0.041	ug/l	1
00807	Fluoranthene	206-44-0	2.8	0.041	ug/l	1
00811	Pyrene	129-00-0	18.	0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	1.5	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	1.2	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	1.5	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	2.9	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	5.6	0.082	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	11.	0.10	ug/l	1
07409	Chrysene	218-01-9	5.5	0.082	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	1.2	0.021	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 03:05	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 13:46	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 03:05	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549176

MA3-MW28S-062205-12-MSD Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA28S SDG#: KMA67-02MSD

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549177

MA3-MW31S-062205-9 Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 14:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA31S SDG#: KMA67-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/24/2005 23:52	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 16:20	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/24/2005 23:52	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1

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Lancaster Laboratories Sample No. WW 4549177

MA3-MW31S-062205-9 Groundwater
062205-2,6 02687.007.006.0001
Moss American
Collected:06/22/2005 14:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

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MA31S SDG#: KMA67-03

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Lancaster Laboratories Sample No. WW 4549178

MA3-MW6S-062205-8 Groundwater
062205-5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 14:40 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

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MA06S SDG#: KMA67-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.082	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.082	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.082	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.021	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 00:24	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 16:59	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 00:24	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1

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Lancaster Laboratories Sample No. WW 4549178

MA3-MW6S-062205-8 Groundwater
062205-5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 14:40 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:14
Discard: 09/06/2005

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MA06S SDG#: KMA67-04

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549179

MA3-TB-062205-17 Groundwater
062205-6 02687.007.006.0001
Moss American
Collected:06/22/2005 18:10

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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MATBS SDG#: KMA67-05TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/24/2005 21:43	Deborah S Garrison	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/24/2005 21:43	Deborah S Garrison	1

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Lancaster Laboratories Sample No. WW 4549180

MA3-TG1-1-062205-15 Groundwater
062205-2,3,4,6 02687.007.006.0001
Moss American
Collected:06/22/2005 17:50 by MP Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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MTG11 SDG#: KMA67-06

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.3		0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	N.D.		0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.		0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.		5.0	mg/l	1
00273	Total Organic Carbon	n.a.	17.5		0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.		0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	51.6		2.1	mg/l	1
08213	BTEX (8021)						
00776	Benzene	71-43-2	N.D.		1.0	ug/l	5
00777	Toluene	108-88-3	N.D.		1.0	ug/l	5
00778	Ethylbenzene	100-41-4	17.		1.0	ug/l	5
00779	Total Xylenes	1330-20-7	23.		3.0	ug/l	5
	Due to dilution of the sample made necessary by the high level of non-targets, normal reporting limits were not attained.						
00774	PAH's in Water by HPLC						
00775	Naphthalene	91-20-3	1,500.		16.	ug/l	10
00782	Acenaphthylene	208-96-8	39.	J	16.	ug/l	10
00783	Acenaphthene	83-32-9	470.		16.	ug/l	10
00784	Fluorene	86-73-7	320.		5.0	ug/l	10
00785	Phenanthrene	85-01-8	660.		8.0	ug/l	100
00789	Anthracene	120-12-7	71.		0.40	ug/l	10
00807	Fluoranthene	206-44-0	290.		4.0	ug/l	100
00811	Pyrene	129-00-0	240.		1.8	ug/l	10
00812	Benzo(a)anthracene	56-55-3	49.		2.0	ug/l	100
00818	Benzo(b)fluoranthene	205-99-2	18.		0.40	ug/l	10
00823	Benzo(a)pyrene	50-32-8	21.		0.20	ug/l	10
00895	Dibenz(a,h)anthracene	53-70-3	2.0	J	0.40	ug/l	10
00898	Indeno(1,2,3-cd)pyrene	193-39-5	10.		0.80	ug/l	10
00907	Benzo(g,h,i)perylene	191-24-2	8.5		1.0	ug/l	10
07409	Chrysene	218-01-9	60.		0.80	ug/l	10
07410	Benzo(k)fluoranthene	207-08-9	11.		0.20	ug/l	10

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Lancaster Laboratories Sample No. WW 4549180

MA3-TG1-1-062205-15 Groundwater
062205-2,3,4,6 02687.007.006.0001
Moss American
Collected:06/22/2005 17:50 by MP Account Number: 07802

Submitted: 06/23/2005 08:45 Kerr-McGee Corporation
Reported: 07/07/2005 at 17:15 PO Box 3048
Discard: 09/06/2005 Livonia MI 48150

MTG11 SDG#: KMA67-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

Due to the sample matrix an initial dilution was necessary to perform the analysis. Therefore, the reporting limits for the PAH by HPLC compounds were raised.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:17	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:26	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 11:50	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 00:07	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:30	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 00:56	Deborah S Garrison	5
00774	PAH's in Water by HPLC	SW-846 8310	1	06/27/2005 01:24	Mark A Clark	10
00774	PAH's in Water by HPLC	SW-846 8310	1	06/27/2005 10:46	Mark A Clark	100
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 00:56	Deborah S Garrison	5
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549181

MA3-TG1-2-062205-14 Groundwater
062205-2,3,4,6 02687.007.006.0001
Moss American
Collected:06/22/2005 17:40 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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MTG12 SDG#: KMA67-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.2	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.75	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	5.1	0.80	mg/l	1
00273	Total Organic Carbon	n.a.	15.3	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	30.1	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	1.0	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
	Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for ethylbenzene. The presence or concentration of this compound cannot be determined due to the presence of this interferent.					
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	18.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	31.	1.6	ug/l	1
00784	Fluorene	86-73-7	14.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	4.1	0.079	ug/l	1
00789	Anthracene	120-12-7	0.76	0.040	ug/l	1
00807	Fluoranthene	206-44-0	1.7	0.040	ug/l	1
00811	Pyrene	129-00-0	1.1	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	0.067 J	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1

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Lancaster Laboratories Sample No. WW 4549181

MA3-TG1-2-062205-14 Groundwater
062205-2,3,4,6 02687.007.006.0001
Moss American
Collected:06/22/2005 17:40 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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MTG12 SDG#: KMA67-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:18	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:28	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 11:51	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 00:15	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:34	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 01:28	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 18:16	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 01:28	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549182

MA3-TG1-3-062205-13 Groundwater
062205-2,4,5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 17:30 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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MTG13 SDG#: KMA67-08

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.5		0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	1.2		0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.		0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	6.7		0.80	mg/l	1
00273	Total Organic Carbon	n.a.	14.2		0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.		0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	28.9		2.1	mg/l	1
08213	BTEX (8021)						
00776	Benzene	71-43-2	N.D.		0.2	ug/l	1
00777	Toluene	108-88-3	N.D.		0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.		0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.		0.6	ug/l	1
00774	PAH's in Water by HPLC						
00775	Naphthalene	91-20-3	N.D.		1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.		1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.		1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.		0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.		0.081	ug/l	1
00789	Anthracene	120-12-7	0.041	J	0.041	ug/l	1
00807	Fluoranthene	206-44-0	0.19	J	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.		0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.		0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.		0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.		0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.		0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.		0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.		0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.		0.020	ug/l	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549182

MA3-TG1-3-062205-13 Groundwater
062205-2,4,5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 17:30 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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MTG13 SDG#: KMA67-08

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:19	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:29	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 11:52	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 00:23	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:35	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 02:01	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 18:55	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 02:01	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549183

MA3-TG2-1-062205-7 Groundwater
062205-1,2,5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 14:30 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG21 SDG#: KMA67-09

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	N.D.		0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	N.D.		0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.		0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.		2.1	mg/l	1
00273	Total Organic Carbon	n.a.	5.0		0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.		0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	6.6	J	2.1	mg/l	1
08213	BTEX (8021)						
00776	Benzene	71-43-2	N.D.		0.2	ug/l	1
00777	Toluene	108-88-3	N.D.		0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.		0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.		0.6	ug/l	1
00774	PAH's in Water by HPLC						
00775	Naphthalene	91-20-3	N.D.		1.7	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.		1.7	ug/l	1
00783	Acenaphthene	83-32-9	N.D.		1.7	ug/l	1
00784	Fluorene	86-73-7	N.D.		0.52	ug/l	1
00785	Phenanthrene	85-01-8	N.D.		0.083	ug/l	1
00789	Anthracene	120-12-7	N.D.		0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.		0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.		0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.		0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.		0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.		0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.		0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.083	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.		0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.		0.083	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.		0.021	ug/l	1

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549183

MA3-TG2-1-062205-7 Groundwater
062205-1,2,5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 14:30 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG21 SDG#: KMA67-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:23	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:30	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 11:56	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 00:31	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:39	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 03:36	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 19:33	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 03:36	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549184

MA3-TG2-2-062205-10 Groundwater
062205-2,4,5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 15:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG22 SDG#: KMA67-10

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	0.58	J	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.50	J	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.		0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.		2.9	mg/l	1
00273	Total Organic Carbon	n.a.	4.2		0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.		0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	5.9	J	2.1	mg/l	1
08213	BTEX (8021)						
00776	Benzene	71-43-2	N.D.		0.2	ug/l	1
00777	Toluene	108-88-3	N.D.		0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.		0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.		0.6	ug/l	1
00774	PAH's in Water by HPLC						
00775	Naphthalene	91-20-3	N.D.		1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.		1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.		1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.		0.49	ug/l	1
00785	Phenanthrene	85-01-8	N.D.		0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.		0.039	ug/l	1
00807	Fluoranthene	206-44-0	0.044	J	0.039	ug/l	1
00811	Pyrene	129-00-0	N.D.		0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.		0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.		0.039	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.		0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.		0.039	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.		0.098	ug/l	1
07409	Chrysene	218-01-9	N.D.		0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.		0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549184

MA3-TG2-2-062205-10 Groundwater
062205-2,4,5,6 02687.007.006.0001
Moss American
Collected:06/22/2005 15:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG22 SDG#: KMA67-10

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:24	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:34	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 11:57	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 00:39	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:40	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 04:08	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 20:12	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 04:08	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549185

MA3-TG2-3-062205-11 Groundwater
062205-2,4,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:00 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG23 SDG#: KMA67-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.9	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	1.9	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	6.7	0.80	mg/l	1
00273	Total Organic Carbon	n.a.	14.5	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	31.3	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.080	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	0.040 J	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.080	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.080	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549185

MA3-TG2-3-062205-11 Groundwater
062205-2,4,6 02687.007.006.0001
Moss American
Collected:06/22/2005 16:00 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG23 SDG#: KMA67-11

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:26	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:38	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 11:59	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 00:47	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:41	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/25/2005 04:41	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 20:50	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/25/2005 04:41	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549186

MA3-TG4-1-062205-1 Groundwater
062205-1,2,3,6 02687.007.006.0001
Moss American
Collected:06/22/2005 08:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG41 SDG#: KMA67-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	0.89 J	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.52	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	2.5	mg/l	1
00273	Total Organic Carbon	n.a.	8.9	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	14.1	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.49	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.039	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.039	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.039	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549186

MA3-TG4-1-062205-1 Groundwater
062205-1,2,3,6 02687.007.006.0001
Moss American
Collected:06/22/2005 08:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG41 SDG#: KMA67-12

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:27	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:39	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 12:00	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 18:58	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:42	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 10:26	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 21:29	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 10:26	Linda C Pape	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549187

MA3-TG4-1-062205-1-DP Groundwater
062205-5 02687.007.006.0001
Moss American
Collected:06/22/2005 08:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MT41D SDG#: KMA67-13FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.49	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.039	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.039	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.039	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.098	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilutic Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 10:59	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 22:08	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 10:59	Linda C Pape	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549187

MA3-TG4-1-062205-1-DP Groundwater
062205-5 02687.007.006.0001
Moss American
Collected:06/22/2005 08:50 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MT41D SDG#: KMA67-13ED

03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549188

MA3-TG4-2-062205-2 Groundwater
062205-1,2,3,6 02687.007.006.0001
Moss American
Collected:06/22/2005 09:00 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG42 SDG#: KMA67-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.2	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.64	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	2.5	mg/l	1
00273	Total Organic Carbon	n.a.	10.5	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	24.6	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.080	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	0.22	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.080	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.080	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

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Lancaster Laboratories Sample No. WW 4549188

MA3-TG4-2-062205-2 Groundwater
062205-1,2,3,6 02687.007.006.0001
Moss American
Collected:06/22/2005 09:00 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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MTG42 SDG#: KMA67-14

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:28	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:40	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 12:01	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 19:06	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:43	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 11:31	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 22:46	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 11:31	Linda C Pape	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549189

MA3-TG4-3-062205-3 Groundwater
062205-1,2,3,6 02687.007.006.0001
Moss American
Collected:06/22/2005 09:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

Kerr-McGee Corporation
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MTG43 SDG#: KMA67-15*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.2	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	0.73	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	2.6	mg/l	1
00273	Total Organic Carbon	n.a.	10.3	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	24.6	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.082	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.082	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.082	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4549189

MA3-TG4-3-062205-3 Groundwater
062205-1,2,3,6 02687.007.006.0001
Moss American
Collected:06/22/2005 09:10 by MP

Account Number: 07802

Submitted: 06/23/2005 08:45
Reported: 07/07/2005 at 17:15
Discard: 09/06/2005

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Livonia MI 48150

MTG43 SDG#: KMA67-15*

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:29	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/23/2005 19:41	Kyle W Eckenroad	1
00220	Nitrate Nitrogen	EPA 353.2	1	07/07/2005 12:02	Nicole M Kepley	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/28/2005 17:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/24/2005 05:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/23/2005 21:09	Nicole R Rohrer	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 19:14	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:44	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	06/28/2005 07:05	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 12:03	Linda C Pape	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/26/2005 23:25	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 12:03	Linda C Pape	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 13:50	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/24/2005 02:00	David V Hershey Jr	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/07/05 at 05:16 PM

Group Number: 948502

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 05174023501A	Sample number(s): 4549180-4549186,4549188-4549189							
Biochemical Oxygen Demand				100	99	85-115	1	8
Batch number: 05174105102A	Sample number(s): 4549180-4549186,4549188-4549189							
Nitrite Nitrogen	N.D.	0.015	mg/l	107		90-110		
Batch number: 05174150512A	Sample number(s): 4549180-4549184							
Total Organic Carbon	0.63 J	0.50	mg/l	103		83-115		
Batch number: 05174150512B	Sample number(s): 4549185							
Total Organic Carbon	0.63 J	0.50	mg/l	103		83-115		
Batch number: 05174WAG026	Sample number(s): 4549173-4549178,4549180-4549189							
Naphthalene	N.D.	1.6	ug/l	87		57-109		
Acenaphthylene	N.D.	1.6	ug/l	87		67-99		
Acenaphthene	N.D.	1.6	ug/l	91		60-116		
Fluorene	N.D.	0.50	ug/l	93		61-116		
Phenanthrene	N.D.	0.080	ug/l	94		67-115		
Anthracene	N.D.	0.040	ug/l	94		68-113		
Fluoranthene	N.D.	0.040	ug/l	94		70-112		
Pyrene	N.D.	0.18	ug/l	91		69-113		
Benzo(a)anthracene	N.D.	0.020	ug/l	98		73-114		
Benzo(b)fluoranthene	N.D.	0.040	ug/l	97		72-113		
Benzo(a)pyrene	N.D.	0.020	ug/l	100		68-112		
Dibenz(a,h)anthracene	N.D.	0.040	ug/l	63		19-129		
Indeno(1,2,3-cd)pyrene	N.D.	0.080	ug/l	81		67-106		
Benzo(g,h,i)perylene	N.D.	0.10	ug/l	46		7-126		
Chrysene	N.D.	0.080	ug/l	91		70-111		
Benzo(k)fluoranthene	N.D.	0.020	ug/l	96		72-119		
Batch number: 05175022601A	Sample number(s): 4549180-4549186,4549188-4549189							
Ortho-Phosphate as P	N.D.	0.010	mg/l	98		95-105		
Batch number: 05175150512B	Sample number(s): 4549186,4549188-4549189							
Total Organic Carbon	0.58 J	0.50	mg/l	103		83-115		
Batch number: 05176A53A	Sample number(s): 4549173-4549185							

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

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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948502
Reported: 07/07/05 at 05:16 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzene	N.D.	0.2	ug/l	109	119	86-119	10	30
Toluene	N.D.	0.2	ug/l	104	114	82-119	9	30
Ethylbenzene	N.D.	0.2	ug/l	104	114	81-119	9	30
Total Xylenes	N.D.	0.6	ug/l	104	114	82-120	9	30
Batch number: 05176A53B	Sample number(s): 4549186-4549189							
Benzene	N.D.	0.2	ug/l	109	119	86-119	10	30
Toluene	N.D.	0.2	ug/l	104	114	82-119	9	30
Ethylbenzene	N.D.	0.2	ug/l	104	114	81-119	9	30
Total Xylenes	N.D.	0.6	ug/l	104	114	82-120	9	30
Batch number: 05178110101A	Sample number(s): 4549180-4549186,4549188-4549189							
Total Phosphorus as PO4 water	N.D.	0.25	mg/l	96		89-110		
Batch number: 05179022101A	Sample number(s): 4549180-4549186,4549188-4549189							
Ammonia Nitrogen	N.D.	0.11	mg/l	97	97	91-100	0	1
Batch number: 05179155301A	Sample number(s): 4549180-4549186,4549188-4549189							
Chemical Oxygen Demand				96		87-102		
Batch number: 05180108101A	Sample number(s): 4549180-4549186							
Kjeldahl Nitrogen	N.D.	0.50	mg/l	98		90-110		
Batch number: 05180108101B	Sample number(s): 4549188-4549189							
Kjeldahl Nitrogen	N.D.	0.50	mg/l	98		90-110		
Batch number: 05188106101B	Sample number(s): 4549180-4549186,4549188-4549189							
Nitrate Nitrogen	N.D.	0.040	mg/l	99		89-110		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG. Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05174023501A	Sample number(s): 4549180-4549186,4549188-4549189								
Biochemical Oxygen Demand	110	119	67-144	8	9	353.	352.	0	9
Batch number: 05174105102A	Sample number(s): 4549180-4549186,4549188-4549189								
Nitrite Nitrogen	100		90-110			N.D.	N.D.	0 (1)	20
Batch number: 05174150512A	Sample number(s): 4549180-4549184								
Total Organic Carbon	102		67-130			24.8	25.3	2	4
Batch number: 05174150512B	Sample number(s): 4549185								
Total Organic Carbon	102		67-130			14.5	14.6	1	4

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

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Lancaster, PA 17605-2425
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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948502
Reported: 07/07/05 at 05:16 PM

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05174WAG026	Sample number(s): 4549173-4549178,4549180-4549189								
Naphthalene	87	87	54-112	5	30				
Acenaphthylene	87	88	63-104	5	30				
Acenaphthene	90	90	59-114	4	30				
Fluorene	93	92	71-99	4	30				
Phenanthrene	95	93	66-115	3	30				
Anthracene	95	93	68-104	3	30				
Fluoranthene	95	92	67-104	2	30				
Pyrene	92	89	66-106	1	30				
Benzo(a)anthracene	98	95	63-111	1	30				
Benzo(b)fluoranthene	96	93	71-106	2	30				
Benzo(a)pyrene	102	98	69-109	1	30				
Dibenz(a,h)anthracene	97	95	35-129	3	30				
Indeno(1,2,3-cd)pyrene	95	91	56-112	1	30				
Benzo(g,h,i)perylene	95	92	35-126	2	30				
Chrysene	92	89	60-107	1	30				
Benzo(k)fluoranthene	97	94	70-109	2	30				
Batch number: 05175022601A	Sample number(s): 4549180-4549186,4549188-4549189								
Ortho-Phosphate as P	98	97	88-113	1	5	N.D.	N.D.	200* (1)	8
Batch number: 05175150512B	Sample number(s): 4549186,4549188-4549189								
Total Organic Carbon	105		67-130			8.1	8.5	4 (1)	4
Batch number: 05176A53A	Sample number(s): 4549173-4549185								
Benzene	114	113	78-131	1	30				
Toluene	109	108	78-129	1	30				
Ethylbenzene	109	109	75-133	0	30				
Total Xylenes	108	108	78-130	0	30				
Batch number: 05176A53B	Sample number(s): 4549186-4549189								
Benzene	114	113	78-131	1	30				
Toluene	109	108	78-129	1	30				
Ethylbenzene	109	109	75-133	0	30				
Total Xylenes	108	108	78-130	0	30				
Batch number: 05178110101A	Sample number(s): 4549180-4549186,4549188-4549189								
Total Phosphorus as PO4 water	107		90-110			N.D.	N.D.	0 (1)	3
Batch number: 05179022101A	Sample number(s): 4549180-4549186,4549188-4549189								
Ammonia Nitrogen						40.1	40.9	2	2
Batch number: 05179155301A	Sample number(s): 4549180-4549186,4549188-4549189								
Chemical Oxygen Demand	63	64	60-129	1	5	32.4	27.3	17* (1)	8
Batch number: 05180108101A	Sample number(s): 4549180-4549186								

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

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

Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948502
Reported: 07/07/05 at 05:16 PM

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Kjeldahl Nitrogen	101		90-110			N.D.	N.D.	14* (1)	7
Batch number: 05180108101B	Sample number(s): 4549188-4549189								
Kjeldahl Nitrogen	94		90-110			11.4	11.1	3	7
Batch number: 05188106101B	Sample number(s): 4549180-4549186,4549188-4549189								
Nitrate Nitrogen	92		90-110			N.D.	N.D.	0 (1)	2

Surrogate Quality Control

Analysis Name: PAH's in Water by HPLC
Batch number: 05174WAG026

	Nitrobenzene	Triphenylene
4549173	116	100
4549174	121	92
4549175	116	101
4549176	105	98
4549177	124	99
4549178	111	98
4549180	84	6059*
4549181	111	93
4549182	116	95
4549183	116	97
4549184	109	100
4549185	107	96
4549186	116	97
4549187	115	94
4549188	109	95
4549189	117	92
Blank	100	95
LCS	116	103
MS	116	101
MSD	105	98
Limits:	63-154	55-130

Analysis Name: BTEX (8021)
Batch number: 05176A53A

	Trifluorotoluene-P
4549173	103
4549174	103
4549175	102

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

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Lancaster, PA 17605-2425
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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948502
Reported: 07/07/05 at 05:16 PM

Surrogate Quality Control

4549176	100
4549177	102
4549178	101
4549179	102
4549180	101
4549181	101
4549182	101
4549183	101
4549184	101
4549185	101
Blank	101
LCS	102
LCSD	102
MS	102
MSD	100
Limits:	69-137

Analysis Name: BTEX (8021)
Batch number: 05176A53B
Trifluorotoluene-P

4549186	102
4549187	101
4549188	101
4549189	100
Blank	100
LCS	102
LCSD	102
MS	102
MSD	100
Limits:	69-137

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

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

Kerr-McGee
Moss American site
Milwaukee, Wisconsin
SDG# KMA68

water samples – BTEX (8021B)

1. Holding Times:

Lab ID	Client ID	Sample Date	Analysis Date
	MA3-		
4550113	FB-06-4	6/23/05	6/27/05
4550114	MW27S	6/23/05	6/27/05
4550115	MW32S-	6/23/05	6/27/05
4550116	MW32S-DP	6/23/05	6/27/05
4550117	MW33S	6/23/05	6/27/05
4550118	MW9S	6/23/05	6/27/05
4550119	TB-06-4	6/23/05	6/27/05
4550120	TG3-1	6/23/05	6/27/05
4550121	TG3-2	6/23/05	6/27/05
4550122	TG3-3	6/23/05	6/27/05

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

2. Method Blank:

One method blank was associated with the BTEX samples (BLK5318). The blank result was 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 required QC limits.

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

Matrix QC was not associated with this sample set.

6. Laboratory Control Sample:

All laboratory control sample results were acceptable.

7. Trip Blanks:

One trip blank was associated with the samples. All trip blank results were non-detect. All results are acceptable.

8. Field Blanks:

One field blank was associated with the samples. All BTEX results were non-detect. All results are acceptable.

9. Field Duplicates:

Samples MW32S/MS32SDP are field duplicates. All results were non-detect.

Water Samples – Polynuclear Aromatic Hydrocarbons (PAHs by HPLC)

1. Holding Times:

Lab ID	Client ID	Sample Date	Extraction Date	Analysis Date
4550113	FB-06-4	6/23/05	6/27/05	6/29/05
4550114	MW27S	6/23/05	6/27/05	6/29/05
4550115	MW32S-	6/23/05	6/27/05	6/29/05
4550116	MW32S-DP	6/23/05	6/27/05	6/29/05
4550117	MW33S	6/23/05	6/27/05	6/29/05
4550118	MW9S	6/23/05	6/27/05	6/29/05
4550119	TB-06-4	6/23/05	6/27/05	6/29/05
4550120	TG3-1	6/23/05	6/27/05	6/29/05
4550121	TG3-2	6/23/05	6/27/05	6/29/05
4550122	TG3-3	6/23/05	6/27/05	6/29/05

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

2. Method Blank:

One method blank was associated with the samples (SBLKWH1762). The method blank was free of contamination.

3. Initial and Continuing Calibration:

Calibration results were acceptable.

4. Surrogate Recovery:

Two surrogates were used for two different detector columns. All surrogate recoveries were within required control limits.

5. Matrix Spike/Matrix Spike Duplicate:

A MS was not analyzed with this sample set.

6. Laboratory Control Sample:

One LCS was associated with the samples. All LCS recoveries were within required control limits.

7. Field Blanks:

One field blank was associated with the samples. The field blank results were non-detect.

8. Field Duplicates:

Samples MW-32S and 32DP are field duplicates. All results were non-detect.

Data reviewed by: T. Balla Date: 8/9/05

7802 948695 4550113-22

COC ID: COC-062305-3

Chain of Custody Record

WESTON SOLUTIONS

RECEIVED JUL 18 2005

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.006.0001
Lab: LANCASTER LABS
TAT: PER QUOTE

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: C. SWEIGART
Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 353.2-NO2	EPA 353.2-NO3	EPA 365.3-ORTHO P, EPA 405.1-BOD	EPA 415.1-TOC	SW846 8021B-BTEX	SW846 8310-PAHS				
						Filtered									
						Container	40 ml Vials	40 ml Vials	500-ml Poly	250 ml Glass	40 ml Vials	1-L Amber				
						Preservative	N/A	H2SO4	N/A	N/A	HCl	N/A				
	MA3-FB-062305-4	G		N	6/23/2005 09:00					3					
	MA3-MW27S-062305-1	G		N	6/23/2005 08:30					3					
	MA3-MW32S-062305-2	G		N	6/23/2005 08:40					3	2				
	MA3-MW32S-062305-2-DP	G		N	6/23/2005 08:40					3	2				
	MA3-MW33S-062305-3	G		N	6/23/2005 08:50					3					
	MA3-MW9S-062305-6	G		N	6/23/2005 10:15					3					
	MA3-TB-062305-5	G		N	6/23/2005					3					
	MA3-TG3-1-062205-4	G		N	6/22/2005 10:40	1	1	1	1	3					
	MA3-TG3-2-062205-5	G		N	6/22/2005 10:50	1	1	1	1	3					
	MA3-TG3-3-062205-6	G		N	6/22/2005 11:00	1	1	1	1	3					

Remarks/Comments

Lab Use Only
Temp of Cooler when Received, C: 2.3C AH 6/24/05

1	2	3	4	5
	2	3		

COC Tape was present on outer package: (Y) N
COC Tape was unbroken on outer package: (Y) N
COC Tape ws present on sample: Y N
COC Tape was unbroken on sample: Y N

Received in good condition: (Y) N
Labels indicate Properly Preserved: (Y) N
Received within Holding Time: (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
	6/23/05 / 17:00						
							6/24/05 0905

Sampled By: T. Walls

7802 948695 4550113-22

COC ID: COC-062305-2

Chain of Custody Record

WESTON SOLUTIONS

Client Kerr McGee

Site Name Moss American | Contact Name Tom Graan

W. O. 02687.007.006.0001 | Contact Phone No. 847-918-4142

Lab LANCASTER LABS | Lab Contact C. SWEIGART

TAT | Lab Phone 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	SW846 8310-PAHS									
						Filtered									
						Container	1-L Amber								
						Preservative	N/A								
	MA3-FB-062305-4	G		N	6/23/2005 09:00	2									
	MA3-MW27S-062305-1	G		N	6/23/2005 08:30	2									
	MA3-MW33S-062305-3	G		N	6/23/2005 08:50	2									
	MA3-MW9S-062305-6	G		N	6/23/2005 10:15	2									
	MA3-TG3-3-062205-6	G		N	6/22/2005 11:00	2									

Remarks/Comments

Sampled By T. Walls

Lab Use Only 2.7 C

Temp of Cooler when Received, C

1	2	3	4	5
2	.	7		

COC Tape was present on outer package (Y) N

COC Tape was unbroken on outer package (Y) N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition (Y) N

Labels indicate Properly Preserved (Y) N

Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
T. Walls	6-23-05/12:00						6/24/05 0905

7802 948695 4550113-22

COC ID: COC-062305-1

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.006.0001 | Contact Phone No.: 847-918-4142

Lab: LANCASTER LABS | Lab Contact: C. SWEIGART

TAT: PER QUOTE | Lab Phone: 717-656-2308 X1527

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	EPA 350.2-NH3	SW846 8310-PAHS	TKN, TP PO4,COD							
						Filtered									
						1-L Glass	1-L Amber	1-L Glass							
						Preservative	N/A	N/A	N/A							
	MA3-TG3-1-062205-4	G		N	6/22/2005 10:40	1	2	1							
	MA3-TG3-2-062205-5	G		N	6/22/2005 10:50	1	2	1							
	MA3-TG3-3-062205-6	G		N	6/22/2005 11:00	1		1							

Remarks/Comments

Sampled By T. Walls

Lab Use Only 4.4C AH 6/24/05

Temp of Cooler when Received, C

1	2	3	4	5
4	4			

COC Tape was present on outer package (Y) N

COC Tape was unbroken on outer package (Y) N

COC Tape ws present on sample Y N

COC Tape was unbroken on sample Y N

Received in good condition (Y) N

Labels indicate Properly Preserved (Y) N

Received within Holding Time (Y) N

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
Tim Walls	6-23-05/1800						
							24 6/24/05 0905

6/24/05

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

734-367-7900

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 948695. Samples arrived at the laboratory on Friday, June 24, 2005. The PO# for this group is ZAKW1KEOK0A90089.

Client Description		Lancaster Labs Number
MA3-FB-062305-4	Groundwater	4550113
MA3-MW27S-062305-1	Groundwater	4550114
MA3-MW32S-062305-2	Groundwater	4550115
MA3-MW32S-062305-2-DP	Groundwater	4550116
MA3-MW33S-062305-3	Groundwater	4550117
MA3-MW9S-062305-6	Groundwater	4550118
MA3-TB-062305-4	Groundwater	4550119
MA3-TG3-1-062205-4	Groundwater	4550120
MA3-TG3-2-062205-5	Groundwater	4550121
MA3-TG3-3-062205-6	Groundwater	4550122

METHODOLOGY

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

1 COPY TO	Weston Solutions, Inc.	Attn: Tom Graan
1 COPY TO	Kerr-McGee Corporation	Attn: Roy Widmann
1 COPY TO	Data Package Group	

Lancaster Laboratories

Questions? Contact your Client Services Representative
Carrie A Fleming at (717) 656-2300

Respectfully Submitted,

Steven A. Skiles
Group Leader

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550113

MA3-FB-062305-4 Groundwater
062305-2,3 02687.007.006.0001
Moss American
Collected:06/23/2005 09:00 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MAFB3 SDG#: KMA68-01FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.5	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.5	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.5	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.48	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.076	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.038	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.038	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.17	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.019	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.038	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.019	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.038	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.076	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.095	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.076	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.019	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 17:25	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 04:36	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 17:25	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550113

MA3-FB-062305-4 **Groundwater**
062305-2,3 **02687.007.006.0001**
Moss American
Collected:06/23/2005 09:00 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MAFB3 SDG#: KMA68-01FB

MEMBER ACIL
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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550114

MA3-MW27S-062305-1 Groundwater
062305-2,3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:30 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA27S SDG#: KMA68-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 18:30	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 05:15	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 18:30	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550114

MA3-MW27S-062305-1 Groundwater
062305-2,3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:30 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA27S SDG#: KMA68-02

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

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550115

MA3-MW32S-062305-2 Groundwater
062305-3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:40 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA32S SDG#: KMA68-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.7	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.7	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.7	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.52	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.083	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.083	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.083	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.021	ug/l	1

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 19:02	Deborah S Garrison	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550115

MA3-MW32S-062305-2 Groundwater
062305-3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:40 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MA32S SDG#: KMA68-03

00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 05:53	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 19:02	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1

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Lancaster, PA 17605-2425
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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550116

MA3-MW32S-062305-2-DP Groundwater
062305-3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:40 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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M32SD SDG#: KMA68-04FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.7	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.7	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.7	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.53	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.086	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.043	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.043	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.043	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.043	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.086	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.11	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.086	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.021	ug/l	1

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 19:35	Deborah S Garrison	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550116

MA3-MW32S-062305-2-DP Groundwater
062305-3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:40 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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M32SD SDG#: KMA68-04FD

00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 06:32	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 19:35	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550117

MA3-MW33S-062305-3 Groundwater
062305-2,3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:50 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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MA33S SDG#: KMA68-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)						
00776	Benzene	71-43-2	N.D.		0.2	ug/l	1
00777	Toluene	108-88-3	N.D.		0.2	ug/l	1
00778	Ethylbenzene	100-41-4	5.8		0.2	ug/l	1
00779	Total Xylenes	1330-20-7	6.6		0.6	ug/l	1
00774	PAH's in Water by HPLC						
00775	Naphthalene	91-20-3	240.		1.7	ug/l	1
00782	Acenaphthylene	208-96-8	9.7	J	1.7	ug/l	1
00783	Acenaphthene	83-32-9	130.		1.7	ug/l	1
00784	Fluorene	86-73-7	48.		2.6	ug/l	5
00785	Phenanthrene	85-01-8	8.6		0.083	ug/l	1
00789	Anthracene	120-12-7	0.25		0.042	ug/l	1
00807	Fluoranthene	206-44-0	N.D.		0.042	ug/l	1
00811	Pyrene	129-00-0	N.D.		0.19	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.		0.021	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.		0.042	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.		0.021	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.		0.042	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.083	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.		0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.		0.083	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.		0.021	ug/l	1

Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 20:07	Deborah S Garrison	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550117

MA3-MW33S-062305-3 Groundwater
062305-2,3 02687.007.006.0001
Moss American
Collected:06/23/2005 08:50 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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Livonia MI 48150

MA33S SDG#: KMA68-05

00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 07:11	Mark A Clark	1
00774	PAH's in Water by HPLC	SW-846 8310	1	07/09/2005 09:30	Mark A Clark	5
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 20:07	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550118

MA3-MW9S-062305-6 Groundwater
062305-2,3 02687.007.006.0001
Moss American
Collected:06/23/2005 10:15 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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MA09S SDG#: KMA68-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 20:40	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 07:49	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 20:40	Deborah S Garrison	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1

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Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550118

MA3-MW9S-062305-6 Groundwater
062305-2,3 02687.007.006.0001
Moss American
Collected:06/23/2005 10:15 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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MA09S SDG#: KMA68-06

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550119

MA3-TB-062305-4 Groundwater
062305-3 02687.007.006.0001
Moss American
Collected:06/23/2005

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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MATB3 SDG#: KMA68-07TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 17:58	Deborah S Garrison	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 17:58	Deborah S Garrison	1

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Lancaster Laboratories Sample No. WW 4550120

MA3-TG3-1-062205-4 Groundwater
062305-1,3 02687.007.006.0001
Moss American
Collected:06/22/2005 10:40 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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MTG31 SDG#: KMA68-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	0.69 J	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	N.D.	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	1.8	mg/l	1
	This sample was not submitted with sufficient time for the analysis to be completed within the 48-hour hold time for BOD.					
00273	Total Organic Carbon	n.a.	8.7	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	20.2	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.51	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.081	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.041	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.041	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.041	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.041	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.081	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.10	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.081	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550120

MA3-TG3-1-062205-4 Groundwater
062305-1,3 02687.007.006.0001
Moss American
Collected:06/22/2005 10:40 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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Livonia MI 48150

MTG31 SDG#: KMA68-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:47	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/24/2005 10:47	Tonya M Beck	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/27/2005 23:07	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/29/2005 16:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/25/2005 06:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/24/2005 21:07	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	06/28/2005 17:56	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:46	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	07/06/2005 07:15	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 21:12	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 08:28	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 21:12	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 14:15	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550121

MA3-TG3-2-062205-5 Groundwater
062305-1,3 02687.007.006.0001
Moss American
Collected:06/22/2005 10:50 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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PO Box 3048
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MTG32 SDG#: KMA68-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.1	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.40	mg/l	10
	Due to interferences from the sample matrix, the reporting limit for the nitrate determination was increased.					
00221	Ammonia Nitrogen	7664-41-7	0.76	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	N.D.	2.7	mg/l	1
	This sample was not submitted with sufficient time for the analysis to be completed within the 48-hour hold time for BOD.					
00273	Total Organic Carbon	n.a.	10.4	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	18.2	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.50	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.079	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.040	ug/l	1
00807	Fluoranthene	206-44-0	N.D.	0.040	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.020	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.040	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.020	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.040	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.079	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.099	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.079	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550121

MA3-TG3-2-062205-5 Groundwater
062305-1,3 02687.007.006.0001
Moss American
Collected:06/22/2005 10:50 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

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MTG32 SDG#: KMA68-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.020	ug/l	1

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:48	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/24/2005 10:48	Tonya M Beck	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/29/2005 20:58	Venia B McFadden	10
00221	Ammonia Nitrogen	EPA 350.2	1	06/29/2005 16:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/25/2005 06:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/24/2005 21:07	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 20:35	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:47	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	07/06/2005 07:15	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 21:44	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 09:45	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 21:44	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 14:15	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550122

MA3-TG3-3-062205-6 Groundwater
062305-1,2,3 02687.007.006.0001
Moss American
Collected:06/22/2005 11:00 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG33 SDG#: KMA68-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00217	Kjeldahl Nitrogen	7727-37-9	1.9	0.50	mg/l	1
00219	Nitrite Nitrogen	14797-65-0	0.015 J	0.015	mg/l	1
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	mg/l	1
00221	Ammonia Nitrogen	7664-41-7	1.4	0.11	mg/l	1
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	mg/l	1
00235	Biochemical Oxygen Demand	n.a.	8.2	0.80	mg/l	1
	This sample was not submitted with sufficient time for the analysis to be completed within the 48-hour hold time for BOD.					
00273	Total Organic Carbon	n.a.	13.1	0.50	mg/l	1
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	mg/l	1
01553	Chemical Oxygen Demand	n.a.	28.7	2.1	mg/l	1
08213	BTEX (8021)					
00776	Benzene	71-43-2	N.D.	0.2	ug/l	1
00777	Toluene	108-88-3	N.D.	0.2	ug/l	1
00778	Ethylbenzene	100-41-4	N.D.	0.2	ug/l	1
00779	Total Xylenes	1330-20-7	N.D.	0.6	ug/l	1
00774	PAH's in Water by HPLC					
00775	Naphthalene	91-20-3	N.D.	1.6	ug/l	1
00782	Acenaphthylene	208-96-8	N.D.	1.6	ug/l	1
00783	Acenaphthene	83-32-9	N.D.	1.6	ug/l	1
00784	Fluorene	86-73-7	N.D.	0.49	ug/l	1
00785	Phenanthrene	85-01-8	N.D.	0.078	ug/l	1
00789	Anthracene	120-12-7	N.D.	0.039	ug/l	1
00807	Fluoranthene	206-44-0	0.056 J	0.039	ug/l	1
00811	Pyrene	129-00-0	N.D.	0.18	ug/l	1
00812	Benzo(a)anthracene	56-55-3	N.D.	0.019	ug/l	1
00818	Benzo(b)fluoranthene	205-99-2	N.D.	0.039	ug/l	1
00823	Benzo(a)pyrene	50-32-8	N.D.	0.019	ug/l	1
00895	Dibenz(a,h)anthracene	53-70-3	N.D.	0.039	ug/l	1
00898	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.078	ug/l	1
00907	Benzo(g,h,i)perylene	191-24-2	N.D.	0.097	ug/l	1
07409	Chrysene	218-01-9	N.D.	0.078	ug/l	1
07410	Benzo(k)fluoranthene	207-08-9	N.D.	0.019	ug/l	1

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4550122

MA3-TG3-3-062205-6 Groundwater
062305-1,2,3 02687.007.006.0001
Moss American
Collected:06/22/2005 11:00 by TW

Account Number: 07802

Submitted: 06/24/2005 09:05
Reported: 07/11/2005 at 23:19
Discard: 09/10/2005

Kerr-McGee Corporation
PO Box 3048
Livonia MI 48150

MTG33 SDG#: KMA68-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor

State of Wisconsin Lab Certification No. EN 748

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00217	Kjeldahl Nitrogen	EPA 351.2	1	06/30/2005 20:49	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	06/24/2005 10:49	Tonya M Beck	1
00220	Nitrate Nitrogen	EPA 353.2	1	06/27/2005 23:17	Venia B McFadden	1
00221	Ammonia Nitrogen	EPA 350.2	1	06/29/2005 16:30	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	06/25/2005 06:00	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	06/24/2005 21:07	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	06/24/2005 20:43	Kyle W Eckenroad	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	06/28/2005 10:48	Nicole M Kepley	1
01553	Chemical Oxygen Demand	EPA 410.2	1	07/06/2005 07:15	Susan A Engle	1
08213	BTEX (8021)	SW-846 8021B	1	06/27/2005 22:16	Deborah S Garrison	1
00774	PAH's in Water by HPLC	SW-846 8310	1	06/29/2005 10:23	Mark A Clark	1
01146	GC VOA Water Prep	SW-846 5030B	1	06/27/2005 22:16	Deborah S Garrison	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	06/29/2005 14:15	Nancy J Shoop	1
03337	PAH Water Extraction	SW-846 3510C	1	06/27/2005 06:45	Mark P Mastropietro	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	06/27/2005 18:10	Nancy J Shoop	1

Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation
Reported: 07/11/05 at 11:19 PM

Group Number: 948695

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 05175023501A	Sample number(s): 4550120-4550122							
Biochemical Oxygen Demand				104	102	85-115	1	8
Batch number: 05175105101A	Sample number(s): 4550121-4550122							
Nitrite Nitrogen	N.D.	0.015	mg/l	103		90-110		
Batch number: 05175105101B	Sample number(s): 4550120							
Nitrite Nitrogen	N.D.	0.015	mg/l	103		90-110		
Batch number: 05175150512A	Sample number(s): 4550121-4550122							
Total Organic Carbon	0.58 J	0.50	mg/l	103		83-115		
Batch number: 05176022601A	Sample number(s): 4550120-4550122							
Ortho-Phosphate as P	N.D.	0.010	mg/l	101		95-105		
Batch number: 05176WAH026	Sample number(s): 4550113-4550118,4550120-4550122							
Naphthalene	N.D.	1.6	ug/l	82	80	57-109	3	30
Acenaphthylene	N.D.	1.6	ug/l	88	86	67-99	2	30
Acenaphthene	N.D.	1.6	ug/l	89	90	60-116	1	30
Fluorene	N.D.	0.50	ug/l	91	92	61-116	0	30
Phenanthrene	N.D.	0.080	ug/l	95	96	67-115	1	30
Anthracene	N.D.	0.040	ug/l	91	91	68-113	0	30
Fluoranthene	N.D.	0.040	ug/l	95	96	70-112	2	30
Pyrene	N.D.	0.18	ug/l	94	96	69-113	1	30
Benzo(a)anthracene	N.D.	0.020	ug/l	99	101	73-114	2	30
Benzo(b)fluoranthene	N.D.	0.040	ug/l	99	101	72-113	2	30
Benzo(a)pyrene	N.D.	0.020	ug/l	98	102	68-112	4	30
Dibenz(a,h)anthracene	N.D.	0.040	ug/l	98	96	19-129	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.080	ug/l	95	91	67-106	4	30
Benzo(g,h,i)perylene	N.D.	0.10	ug/l	90	88	7-126	2	30
Chrysene	N.D.	0.080	ug/l	96	98	70-111	2	30
Benzo(k)fluoranthene	N.D.	0.020	ug/l	99	103	72-119	4	30
Batch number: 05178106101B	Sample number(s): 4550120,4550122							
Nitrate Nitrogen	N.D.	0.040	mg/l	100		89-110		
Batch number: 05178110101A	Sample number(s): 4550120							

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

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2425 New Holland Pike
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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948695
Reported: 07/11/05 at 11:19 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Phosphorus as PO4 water	N.D.	0.25	mg/l	96		89-110		
Batch number: 05178110101B	Sample number(s): 4550121-4550122							
Total Phosphorus as PO4 water	N.D.	0.25	mg/l	96		89-110		
Batch number: 05178A53A	Sample number(s): 4550113-4550122							
Benzene	N.D.	0.2	ug/l	109	109	86-119	1	30
Toluene	N.D.	0.2	ug/l	104	104	82-119	0	30
Ethylbenzene	N.D.	0.2	ug/l	106	105	81-119	1	30
Total Xylenes	N.D.	0.6	ug/l	105	105	82-120	1	30
Batch number: 05179150511A	Sample number(s): 4550120							
Total Organic Carbon	N.D.	0.50	mg/l	103		83-115		
Batch number: 05180022101A	Sample number(s): 4550120-4550122							
Ammonia Nitrogen	N.D.	0.11	mg/l	97		91-100		
Batch number: 05180106103A	Sample number(s): 4550121							
Nitrate Nitrogen	N.D.	0.040	mg/l	101		89-110		
Batch number: 05180108102A	Sample number(s): 4550120-4550122							
Kjeldahl Nitrogen	N.D.	0.50	mg/l	100		90-110		
Batch number: 05187155301A	Sample number(s): 4550120-4550122							
Chemical Oxygen Demand				96		87-102		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05175023501A	Sample number(s): 4550120-4550122								
Biochemical Oxygen Demand	108	110	67-144	2	9	208.	204.	2	9
Batch number: 05175105101A	Sample number(s): 4550121-4550122								
Nitrite Nitrogen	102		90-110			N.D.	N.D.	200* (1)	20
Batch number: 05175105101B	Sample number(s): 4550120								
Nitrite Nitrogen	107		90-110			N.D.	N.D.	0 (1)	20
Batch number: 05175150512A	Sample number(s): 4550121-4550122								
Total Organic Carbon	106		67-130			6.0	6.2	3 (1)	4
Batch number: 05176022601A	Sample number(s): 4550120-4550122								
Ortho-Phosphate as P	100	101	88-113	1	5	N.D.	N.D.	200* (1)	8

*- Outside of specification
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(2) The background result was more than four times the spike added.

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Lancaster Laboratories

Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948695
Reported: 07/11/05 at 11:19 PM

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05178106101B	Sample number(s): 4550120,4550122								
Nitrate Nitrogen	93		90-110			N.D.	N.D.	0 (1)	2
Batch number: 05178110101A	Sample number(s): 4550120								
Total Phosphorus as PO4 water	107		90-110			N.D.	N.D.	0 (1)	3
Batch number: 05178110101B	Sample number(s): 4550121-4550122								
Total Phosphorus as PO4 water	98		90-110			N.D.	N.D.	0 (1)	3
Batch number: 05178A53A	Sample number(s): 4550113-4550122								
Benzene	114		78-131						
Toluene	109		78-129						
Ethylbenzene	110		75-133						
Total Xylenes	110		78-130						
Batch number: 05179150511A	Sample number(s): 4550120								
Total Organic Carbon	109		67-130			N.D.	N.D.	200* (1)	4
Batch number: 05180022101A	Sample number(s): 4550120-4550122								
Ammonia Nitrogen	(2)	(2)	64-128	2	8	131,000.	129,000.	2	2
Batch number: 05180106103A	Sample number(s): 4550121								
Nitrate Nitrogen	104		90-110			3.4	3.1	9*	2
Batch number: 05180108102A	Sample number(s): 4550120-4550122								
Kjeldahl Nitrogen	95		90-110			0.65 J	1.1	54* (1)	7
Batch number: 05187155301A	Sample number(s): 4550120-4550122								
Chemical Oxygen Demand	89	85	60-129	2	5	165.	159.	4 (1)	8

Surrogate Quality Control

Analysis Name: PAH's in Water by HPLC
Batch number: 05176WAH026

	Nitrobenzene	Triphenylene
4550113	123	96
4550114	122	96
4550115	120	100
4550116	118	98
4550117	130	102
4550118	109	101
4550120	106	93

*- Outside of specification
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Quality Control Summary

Client Name: Kerr-McGee Corporation Group Number: 948695
Reported: 07/11/05 at 11:19 PM

Surrogate Quality Control

4550121	120	98
4550122	116	94
Blank	121	104
LCS	110	102
LCSD	120	104
Limits:	63-154	55-130

Analysis Name: BTEX (8021)
Batch number: 05178A53A
Trifluorotoluene-P

4550113	104
4550114	103
4550115	101
4550116	102
4550117	101
4550118	103
4550119	102
4550120	102
4550121	102
4550122	101
Blank	103
LCS	102
LCSD	102
MS	103
Limits:	69-137

*- Outside of specification
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