ANNUAL GROUNDWATER TREATMENT PERFORMANCE MONITORING REPORT Q1 AND Q3 2009 MOSS-AMERICAN SITE MILWAUKEE, WISCONSIN

Prepared for

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W. O. No. 13741.003.003.0010

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1. INTRODUCTION

In accordance with paragraph 4a of the Remedial Design/Remedial Action Statement of Work (RD/RA SOW), Tronox LLC (TRONOX), formerly known as Kerr-McGee Chemical, LLC, is required to implement a groundwater monitoring program capable of detecting changes in chemical concentrations in the groundwater. TRONOX has directed Weston Solutions, Inc. (WESTON®) to perform this work. This report presents the findings for the sampling conducted in Q1 and Q3 of 2009.

The current monitoring network includes four shallow groundwater monitoring wells (MW-5S, MW-7S, MW-9S, and MW-27S), nine containment performance monitoring wells (MW-30S, MW-31S, MW-32S, MW-33S, MW-34S, MW-35S, MW-37S, MW-38S, and MW-39S), and nine piezometers (PZ-01 through PZ-07, PZ-09, and PZ-10). Each of the monitoring wells and piezometers is screened in the shallow groundwater-bearing zone underlying the site. These monitoring locations are indicated on Figure 1-1.

A treatment performance monitoring network has also been installed per the Quality Assurance Project Plan for Installation of Groundwater Remedial System (QAPP) (WESTON, October 1999). This network includes six groundwater treatment gates (TG1 through TG6) with three treatment performance monitoring wells located at each groundwater treatment gate. At each treatment gate, monitoring wells 1, 2, and 3 are located upgradient, within, and downgradient of the treatment gate (e.g., TG1-1, TG1-2, and TG1-3). The locations of the treatment performance monitoring wells are indicated on Figure 1-1.

In addition to the on-site groundwater monitoring wells, 11 shallow groundwater monitoring wells (MW-A through MW-K) monitor groundwater conditions between the old and new river channels in Reaches 1 through 3. The locations of the river reach wells are indicated in Figure 1-2 through 1-4.

A number of modifications have been made to the sampling program. A complete discussion of these modifications is presented in the Quarterly Groundwater Treatment Performance Monitoring Report, Q1 2007, (WESTON, May 2007). The current groundwater monitoring program is outlined in Table 1-1. In March and September of each year, four monitoring wells

(MW-7S, MW-34S, MW-38S, and MW-39S) are sampled to monitor plume conditions within the containment area. In September of each year, the shallow monitoring wells, performance monitoring wells, treatment performance monitoring wells, and river reach wells are sampled. Only the upgradient and downgradient treatment performance monitoring wells are sampled. A complete round of groundwater levels is also measured in September of each year.

In accordance with paragraph 4a (i) of the RD/RA SOW, the 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 field measurements for samples collected from the treatment performance monitoring wells include groundwater elevation, pH, temperature, turbidity, specific conductance, redox potential, and DO. 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.

LEGEND

- CABLE FENCE
- CATCH BASIN
- HYDRANT
- SIGN
- FREE PRODUCT COLLECTION SUMP
- UTILITY POLE
- SAMPLING MANHOLE
- MONITORING WELL
- INJECTION WELL
- CURRENT RIVER CHANNEL
- FORMER RIVER CHANNEL
- PIEZOMETER

N

0 100'

SCALE

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

Existing Building
Pad Elev. 721.6

SILO ENCLOSURE

Little Menomonee River

MW-7S
MW-34S
PZ-02
MW-33S
MW-38S
MW-39S
MW-A
MW-5S
MW-32S
PZ-03
MW-27S
MW-35S
MW-30S
PZ-04
MW-9S
PZ-01
PZ-10
PZ-09
MW-37S
PZ-07
PZ-06
MW-31S
PZ-05

GATE 1: TG1-1, TG1-2, TG1-3
GATE 2: TG2-1, TG2-2, TG2-3
GATE 3: TG3-1, TG3-2, TG3-3
GATE 4: TG4-1, TG4-2, TG4-3
GATE 5: TG5-1, TG5-2, TG5-3
GATE 6: TG6-1, TG6-2, TG6-3

DRAINAGE SWALE

WOODS

EXISTING SHEET PILE (TYP.)

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

DECON. PAD

ASPHALT PAD

ASPHALT (TYP.)

GRAVEL (TYP.)

CONSTRUCTION TRAILERS

DRUM STORAGE AREA

TREATED SOIL AND SEDIMENT FILL AREA

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

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

FIGURE 1-1

WESTON SOLUTIONS

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

MONITORING WELL LOCATIONS
TRONOX, LLC
MOSS-AMERICAN SITE
Milwaukee, Wisconsin

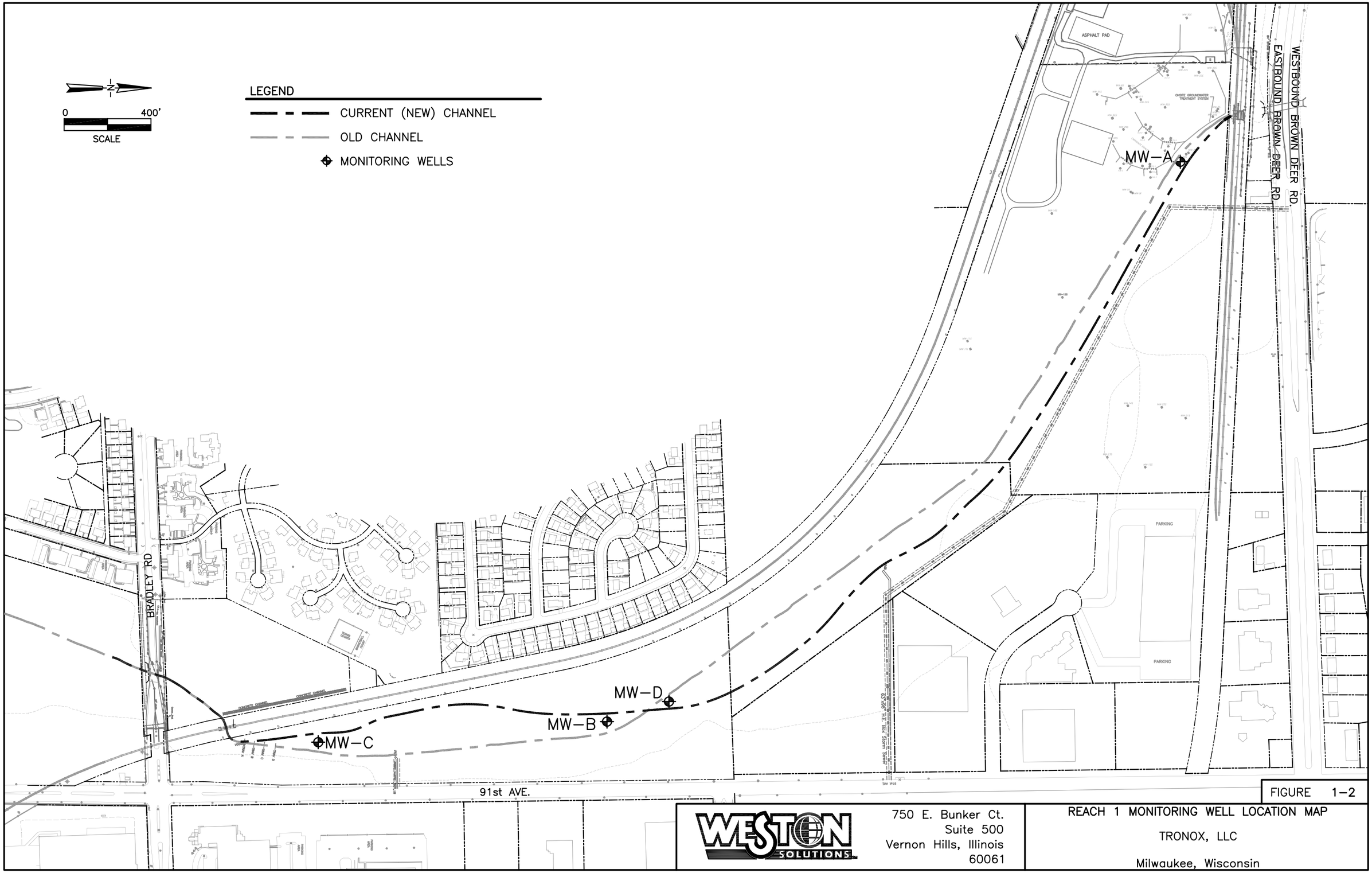

FIGURE 1-2

WESTON SOLUTIONS

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

REACH 1 MONITORING WELL LOCATION MAP

TRONOX, LLC

Milwaukee, Wisconsin

J:\moss-1\REACH-1\200-SCALE-WELLMAP.dwg, 12/7/2007 9:29:37 AM

LEGEND

- CURRENT (NEW) CHANNEL
- OLD CHANNEL
- MONITORING WELLS

FIGURE 1-3

WESTON SOLUTIONS

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

REACH 2 MONITORING WELL LOCATION MAP

TRONOX, LLC

Milwaukee, Wisconsin

J:\moss-im\REACH-2-3\100-SCALE-WELLS.dwg, 12/7/2007 9:31:28 AM

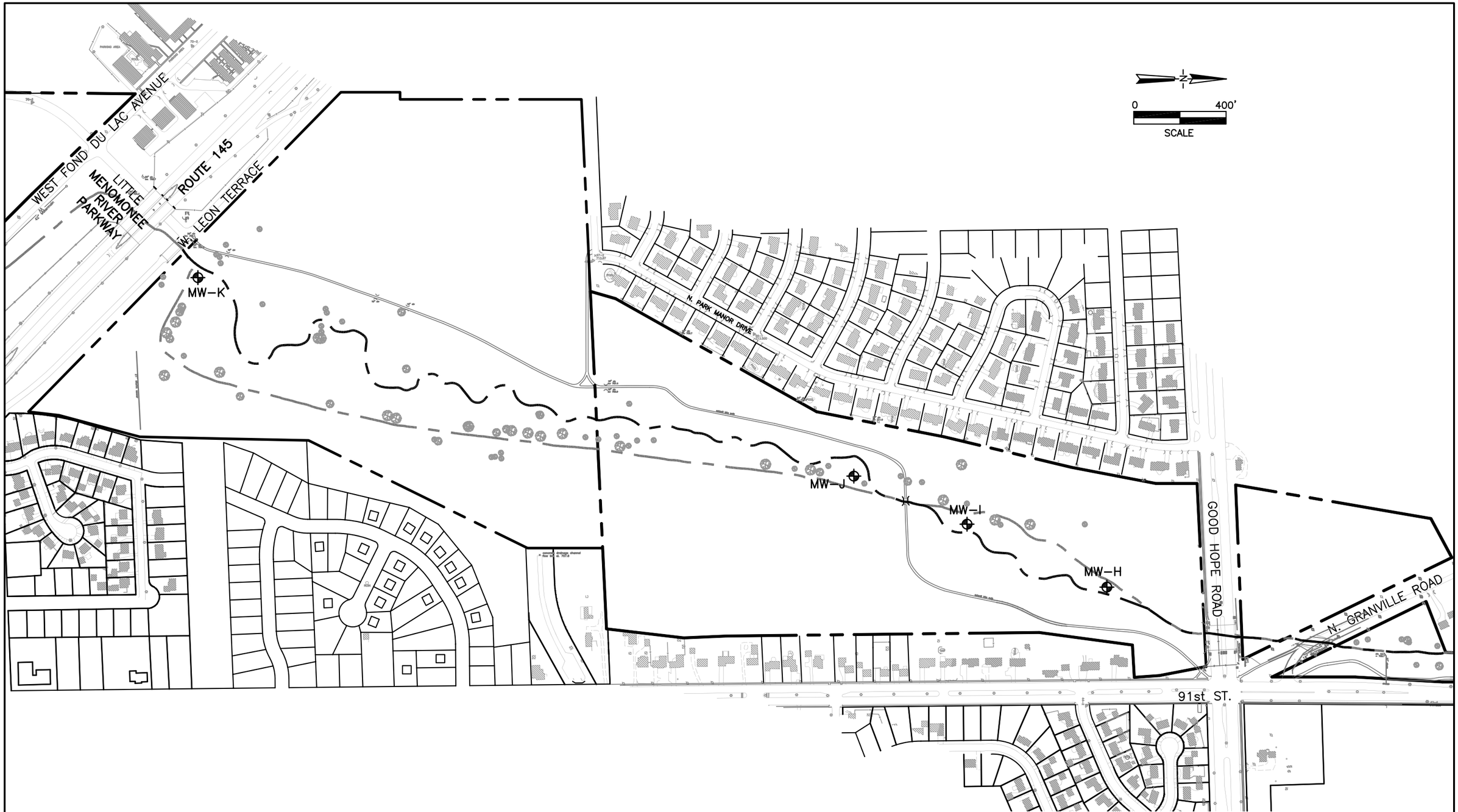

FIGURE 1-4

WESTON SOLUTIONS

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

REACH 3 MONITORING WELL LOCATION MAP

TRONOX, LLC

Milwaukee, Wisconsin

J:\mass-1m\REACH-2-3\100-SCALE-MWELLS.dwg, 12/7/2007 9:31:56 AM

2. ON-SITE GROUNDWATER MONITORING RESULTS

The Q1 2009 groundwater-monitoring event at the Moss-American site was completed on 25 March 2009. Tasks completed during the field effort for this event included the collection of groundwater elevation data and groundwater samples from the four shallow and containment performance monitoring wells located in the plume area (MW-7S, MW-34S, MW-38S, and MW-39S).

The Q3 2009 groundwater-monitoring event at the Moss-American site was completed between 15 and 19 September 2009. 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. Groundwater elevation measurements were also collected from the 11 monitoring wells located along Reaches 1 through 3. Following groundwater elevation and DO measurements, groundwater samples were collected from the shallow, containment performance, treatment performance, and river reach groundwater monitoring wells. The results of the Q1 and Q3 2009 groundwater sampling event are described in the following subsections.

2.1 GROUNDWATER ELEVATION MEASUREMENTS

2.1.1 Q1 2009

Depths to water measurements in each of four shallow groundwater monitoring wells located in the plume area were made on 25 March 2009. The water level measurements for the shallow groundwater monitoring wells located in the plume area and groundwater elevations (as applicable) are presented in Table 2-1.

2.1.2 Q3 2009

Depth to water measurements in each of the shallow groundwater monitoring wells, containment performance monitoring wells, treatment performance monitoring wells, additional monitoring wells, and piezometers were made on 15 September 2009. 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 of the shallow groundwater monitoring and containment performance monitoring wells and calculated groundwater elevations are

presented in Table 2-2. 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 2-3. The groundwater levels for the piezometers are presented in Table 2-4. Figure 2-1 presents a potentiometric surface map of the shallow groundwater-bearing zone, based on the September 2009 (Q3) data. An evaluation of the Q3 2009 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 Little Menominee River (LMR). In the topographically higher (western) portion of the site, the horizontal hydraulic gradient is relatively steep, at approximately 0.032 feet per foot (ft/ft) to the northeast, as measured from the vicinity of PZ-07 to TG2-1. The topography of the site levels out near the river, as does the potentiometric surface with a northerly hydraulic gradient of approximately 0.013 ft/ft, as measured from the vicinity of PZ-05 to the vicinity of MW-9S. The estimated hydraulic gradients within the treatment gates ranged from 0.0007 to 0.0043 ft/ft (Table 2-3). The hydraulic gradient is relatively flat within the treatment gate area with an overall hydraulic gradient from TG1 to TG5 of approximately 0.0026 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 0.032 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 0.0032 ft/day. Near the river, using a hydraulic gradient of 0.013 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 0.13 ft/day. The groundwater flow velocities within the treatment gates are estimated to range from 0.0066 to 0.1049 ft/day. The groundwater flow velocity through each treatment gate is presented in Table 2-3.

2.2 GROUNDWATER SAMPLE ANALYTICAL RESULTS

Groundwater samples, in Q1 2009, were collected from four shallow and containment performance monitoring wells located in the plume area (MW-7S, MW-34S, MW-38S, and MW-39S). Groundwater samples, in Q3 2009, were collected from a total of 25 shallow monitoring wells screened within the shallow groundwater-bearing zone. The shallow wells sampled include four shallow groundwater monitoring wells (MW-5S, MW-7S, MW-9S, and MW-27S); nine containment performance monitoring wells (MW-30S, MW-31S, MW-32S, MW-33S, MW-34S, MW-35S, MW-37S, MW-38S, and MW-39S); and twelve treatment performance monitoring wells (TG1-1, TG1-3, TG2-1, TG2-3, TG3-1, TG3-3, TG4-1, TG4-3, TG5-1, TG5-3, TG6-1, and TG6-3).

In addition to the investigative samples collected in Q1 2009, one field duplicate and one matrix spike / matrix spike duplicate (MS/MSD) was collected for quality assurance/quality control (QA/QC) purposes. In addition to the investigative groundwater samples collected in Q3 2009, 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 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.

2.2.3 Field-Measured Parameters

The groundwater samples for both sampling events, Q1 and Q3 2009, were measured in the field for pH, specific conductance, temperature, and turbidity. The field parameters were collected using a YSI 556 portable water quality meter and a Hanna HI98703 turbidimeter. Also, in Q3 2009 downhole DO and redox potential readings were collected from monitoring wells after sampling at a given well was completed. 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 2-5. Water quality parameter measurements were not collected from wells MW-34S and TG1-1 due to the presence, or the historical presence, of sheen or product in the purge water during both Q1 and Q3 2009.

2.2.3.1 pH

The pH of the groundwater samples collected during Q1 2009 ranged from 7.05 to 7.13 pH standard units (S.U.). The pH of the groundwater samples collected during Q3 2009 ranged from 6.67 to 7.35 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.

2.2.3.2 Redox Potential

No redox potential measurements were collected during Q1 2009. The redox potentials of the groundwater samples collected at the site during Q3 2009 ranged from -109.7 to 185.7 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 continues under anaerobic conditions, the reduced ionic species concentration increases, resulting in an overall decrease of the water's oxidation potential.

2.2.3.3 Dissolved Oxygen

No DO level measurements were collected during Q1 2009. DO levels for the groundwater samples collected during Q3 2009 ranged from 0.40 to 4.15 milligrams per liter (mg/L). Overall, the DO readings indicate the presence of intermediate levels of oxygen in the water, and the system as a whole is considered to be generally under oxic 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.

2.2.3.4 Specific Conductance

The specific conductance of the groundwater samples collected during Q1 2009 ranged from 1.194 to 1.437 millimhos per centimeter (mmho/cm). The specific conductance of the groundwater samples collected during Q3 2009 ranged from 0.911 to 1.658 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.

2.2.3.5 Temperature

Groundwater temperatures ranged from 5.74 to 6.75 degrees Celsius (°C) during Q1 2009. Groundwater temperatures ranged from 13.40 to 17.83 °C during Q3 2009. Temperature is an

extremely important factor in bioremediation because microbial growth rates are greatly dependent upon temperature.

2.2.3.6 Turbidity

Turbidity ranged from 8.02 to 31.3 nephelometric turbidity units (NTU) during Q1 2009. Turbidity ranged from 0.41 to 34 NTU during Q3 2009. 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.

2.2.4 Laboratory Analyses

The results of the laboratory analyses performed on the groundwater samples collected during March (Q1) and September (Q3) 2009 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.

2.2.4.1 Laboratory Analyses for BTEX and PAH

Each groundwater sample collected during the March (Q1) and September (Q3) 2009 sampling events were 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 2-6 for the Q1 2009 data and Table 2-7 for the Q3 2009 data. Tables 2-6 and 2-7 identify 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 Tables 2-6 and 2-7. Exceedances are summarized in the following paragraphs.

Groundwater Sample Results

As shown in tables 2-6 and 2-7, anthracene, 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 Exceedances – Q1 2009

- Anthracene was detected at concentrations exceeding the PAL of 600 µg/L in the groundwater sample collected from well MW-34S.
- Benzene was detected at concentrations exceeding the PAL of 0.5 µg/L in the groundwater samples collected from wells MW-7S, MW-34S, and MW-38S.
- Benzo(a)pyrene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from well MW-34S.
- Benzo(b)fluoranthene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from well MW-34S.
- Chrysene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from well MW-34S.
- Fluoranthene was detected at concentrations exceeding the PAL of 80 µg/L in the groundwater sample collected from well MW-34S.
- Fluorene was detected at concentrations exceeding the PAL of 80 µg/L in the groundwater samples collected from well MW-34S.
- Naphthalene was detected at concentrations exceeding the PAL of 8 µg/L in the groundwater samples from wells MW-7S, MW-34S and MW-38S.
- Pyrene was detected at concentrations exceeding the PAL of 50 µg/L in the groundwater sample collected from well MW-34S.

WDNR ES Exceedances – Q1 2009

- Benzene was detected at a concentration 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 sample collected from well MW-34S.
- Benzo(b)fluoranthene was detected at concentrations exceeding the ES of 0.2 µg/L in the groundwater sample collected from well MW-34S.
- Chrysene was detected at concentrations exceeding the ES of 0.2 µg/L in the groundwater sample collected from well MW-34S.
- Fluoranthene was detected at concentrations exceeding the ES of 400 µg/L in the groundwater sample collected from well MW-34S.
- Fluorene was detected at concentrations exceeding the ES of 400 µg/L in the groundwater samples 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-34S and MW-38S.

- Pyrene was detected at concentrations exceeding the ES of 250 µg/L in the groundwater samples collected from well MW-34S.

WDNR PAL Exceedances – Q3 2009

- Anthracene was detected at concentrations exceeding the PAL of 600 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.

- Benzene was detected at concentrations exceeding the PAL of 0.5 µg/L in the groundwater samples collected from wells MW-7S, MW-34S, and MW-38S.

- Benzo(a)pyrene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from wells MW-34S, TG1-1, TG2-3 and TG4-1.

- Benzo(b)fluoranthene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from wells MW-34S, TG1-1, TG2-3 and TG4-1.

- Chrysene was detected at concentrations exceeding the PAL of 0.02 µg/L in the groundwater samples collected from wells MW-34S, MW-35S, TG1-1, TG2-3 and TG4-1.

- Fluoranthene was detected at concentrations 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-33S, MW-34S, MW-38S, and TG1-1.

- Pyrene was detected at concentrations exceeding the PAL of 50 µg/L in the groundwater sample collected from wells MW-34S and TG1-1.

WDNR ES Exceedances – Q3 2009

- Benzene was detected at a concentration 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 concentrations exceeding the ES of 400 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.
- Fluorene was detected at concentrations exceeding the ES of 400 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.
- Naphthalene was detected at concentrations exceeding the ES of 40 µg/L in the groundwater samples collected from wells MW-33S, MW-34S, MW-38S, and TG1-1.
- Pyrene was detected at concentrations exceeding the ES of 250 µg/L in the groundwater samples collected from wells MW-34S and TG1-1.

The data from Q 1 2009 indicate that PAL and ES exceedences were detected in MW-7S, MW-34S, and MW-38S. Exceedences were not detected in MW-39S.

Based on the Q3 2009 data, the plume boundary is primarily in an area encompassing four shallow monitoring wells (MW-7S, MW-33S, MW-34S, and MW-38S). As shown on Figure 2-1, a plume boundary has also been included at containment well MW-35S and treatment gate wells TG1-1, TG2-3 and TG4-1, where minor PAL exceedences were found. No other wells during this sampling event had exceedances above WDNR PALs or WDNR ES.

The majority of PAL and ES exceedances, as well as detections of BTEX and PAH constituents below PAL and ES levels, 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 only sporadic detections. Based on the detected concentrations, the contaminant plume generally demonstrates a northeasterly trend, as indicated in Figure 2-1, similar to the previous groundwater sampling events. Low to very low (estimated) concentrations of BTEX compounds, acenaphthene, anthracene, benzo(b)flouranthene, benzo(k)fluoranthene, fluoranthene, flourene, phenanthrene, and/or pyrene were detected during the Q3 2009 round in monitoring wells MW-31S, MW-37S, MW-39S and in treatment gate wells TG1-3, TG2-1, TG3-1, TG3-3, TG4-3, TG5-1, TG5-3, TG6-1, and TG6-3, where exceedances of PALs/ESs did not occur.

A summary of the concentration of contaminants at wells that have regularly exceeded PALs and/or ESs during the last 17 quarters (6 years) is presented in Table 2-8. 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, as follows. Concentrations of benzene, naphthalene, and fluorene have not exceeded PALs and/or ESs in MW-32S and MW-35S over the past six or more years. Benzo(a)pyrene in MW-35S has been detected at estimated concentrations, but above the PAL sporadically over the past six years. Benzene and naphthalene concentrations in MW-33S have shown a decreasing trend; however, fluorene concentrations, below PALs, continue to fluctuate in MW-33S.

Benzene and benzo(a)pyrene concentrations have remained relatively constant in MW-7S; however, fluorene and naphthalene concentrations show an overall decreasing trend in MW-7S. Well MW-34S has shown overall fluctuating levels in naphthalene, fluorene, and benzo(a)pyrene; however, benzene concentrations have remained relatively consistent in MW-34S. During Q1 and Q3 2009 only a sheen was detected on the groundwater 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. These fluctuating concentrations could be due to the presence of free product which has historically been observed in well TG1-1. During Q3 2009, only a sheen was detected on the groundwater in well TG1-1.

2.2.4.2 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 2-9. 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

Nitrite (NO_2-N) was detected in one of the treatment performance wells (TG3-3) at an estimated concentration of 0.017 mg/L. Nitrate (NO_3-N) was detected in one of the treatment performance wells (TG3-1) at an estimated concentration of 0.044 mg/L. Total Kjeldahl Nitrogen (TKN)

results include seven detections with concentrations ranging from 0.69 to 1.9 mg/L. Ammonia (NH_3-N) results include seven detections ranging from 0.24 to 0.65 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.

Total phosphorous (PO_4-P) was detected in treatment performance gates TG1-1, TG2-3, and TG6-1 at concentrations of 13.0, 0.27, and 0.30 mg/L, respectively. Orthophosphate (ORP) was not detected in any of the treatment performance monitoring wells.

BOD, COD, and TOC

BOD was detected in five of the twelve treatment wells sampled and ranged from 8.6 to 19.8 mg/L. COD concentrations for the samples collected throughout the treatment system ranged from 6.1 to 294 mg/L. TOC concentrations for the samples collected throughout the treatment system ranged from 2.2 to 11.2 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 included detections ranging from 3.1×10^2 to 5.7×10^4 colony forming units per milliliter (CFU/mL) during Q3 2009. The total microbial population for TG3 and TG4 ranged from non-detect to 1.89×10^4 CFU/mL during Q3 2009. The total microbial populations for TG5 and TG6 ranged from non-detect to 1.0×10^3 CFU/mL during Q3 2009.

The result of degrader microbial population analysis for TG1 and TG2 included three non-detect results and one detection of 7.4×10^3 CFU/mL, in TG1-1 during Q3 2009. The degrader

microbial populations for TG3 and TG4 included four non-detect results during Q3 2009. The degrader microbial populations for TG5 and TG6 included four non-detect results during Q3 2009.

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
- NM GROUNDWATER ELEVATION NOT MEASURED

N

0 100' SCALE

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

MW-7S 714.84
MW-34S 714.78
PZ-02 714.06
MW-33S 714.52
MW-38S
MW-39S
MW-A 712.25
Little Menomonee River
MW-5S 718.19
MW-32S 714.94
PZ-03 714.84
Existing Building Pad Elev. 721.6
SILO ENCLOSURE
MW-35S 714.84
MW-27S 716.33
MW-30S 722.32
TG1-3 715.96
TG1-2 715.91
TG1-1 716.03
PZ-10 718.18
GATE
PZ-09 717.55
TG2-3 715.32
TG2-2 715.95
TG2-1 716.43
GATE 2
GATE 4
TG4-1 714.62
TG4-2 NM
TG4-3 715.05
GATE 5
TG5-2 NM
TG5-3 714.69
TG5-1 714.79
GATE 3
TG3-1 714.79
TG3-2 NM
TG3-3 714.59
PZ-01 714.96
PZ-04 713.47
MW-9S 714.51
GATE 6
TG6-1 715.38
TG6-2 NM
TG6-3 715.19
MW-37S 715.67
EXISTING SHEET PILE (TYP.)
PZ-07 721.87
PZ-06 720.25
MW-31S 719.28
PZ-05 718.41
DECON PAD
ASPHALT PAD
DRUM STORAGE AREA
TREATED SOIL AND SEDIMENT FILL AREA
ASPHALT (TYP.)
GRAVEL (TYP.)
CONSTRUCTION TRAILERS
WOODS
BYRAM STREET

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

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

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

714 715 716 717 718 719 720 721 722 725 730 731 732 733 734 735 736 737 738 745

FIGURE 2-1

WESTON SOLUTIONS

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

GROUNDWATER ELEVATION CONTOUR MAP
3RD QUARTER 2009
TRONOX, LLC
MOSS-AMERICAN SITE
Milwaukee, Wisconsin

J:\CAD93\000\00303.dwg, 12/15/2009 10:31:00 AM

Table 2-1
Groundwater Elevation Measurements
Piezometers and Staff Gauge
Moss-American Site
Milwaukee, Wisconsin
First Quarter 2009

Well ID	Ground Elevation	TOC Elevation	Depth to Water	Groundwater Elevation	Product Thickness
MW-7S	719.47	721.59	3.67	717.92	None Detected
MW-34S	718.97	721.52	4.34	717.18	Sheen on GW
MW-38S	--	--	3.27	--	None Detected
MW-39S	--	--	3.84	--	

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 25 March 2009
Ground elevation and TOC elevations at MW-38S and MW-39S will be surveyed during future site work.

Table 2-2
Groundwater Elevation Measurements
Shallow and Containment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Well ID	Ground Elevation	TOC Elevation	Depth to Water	Groundwater Elevation	Product Thickness
MW-5S	723.41	724.63	6.44	718.19	None Detected
MW-7S	719.47	721.59	6.75	714.84	Sheen on GW
MW-9S	719.15	721.66	7.15	714.51	None Detected
MW-27S	720.57	723.10	6.77	716.33	
MW-30S	725.35	727.34	5.02	722.32	
MW-31S	725.29	725.31	6.03	719.28	
MW-32S	719.68	722.79	7.85	714.94	
MW-33S	719.25	721.81	7.29	714.52	
MW-34S	718.97	721.52	6.74	714.78	Sheen on GW
MW-35S	718.14	721.75	6.91	714.84	None Detected
MW-37S	721.33	723.30	7.63	715.67	
MW-38S	NS	NS	6.51	---	
MW-39S	NS	NS	5.88	---	

Notes:
All values in feet.
All elevation measurements are with respect to Mean Sea Level (MSL).
TOC = Top of well casing.
GW = Groundwater.
NS = Not Surveyed.
Depth to groundwater was measured on 15 September 2009

Table 2-3
Groundwater Elevation Measurements
Treatment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

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	7.29	716.03	0.0007	0.0066	Sheen on GW
TG1-2	720.06	722.81	6.90	715.91			None Detected
TG1-3	719.56	722.53	6.57	715.96			
TG2-1	720.67	723.80	7.37	716.43	0.0111	0.1049	Sheen on GW
TG2-2	720.62	723.05	7.10	715.95			None Detected
TG2-3	720.06	722.61	7.29	715.32			
TG3-1	719.14	721.05	6.26	714.79	0.0020	0.0189	
TG3-2	718.87	720.92	NM	--			
TG3-3	718.35	720.60	6.01	714.59			
TG4-1	718.06	721.14	6.52	714.62	-0.0043	-0.0406	
TG4-2	718.26	720.75	NM	--			
TG4-3	718.01	720.04	4.99	715.05			
TG5-1	717.60	721.12	6.33	714.79	0.0010	0.0094	
TG5-2	718.18	720.63	NM	--			
TG5-3	718.17	719.99	5.30	714.69			
TG6-1	719.47	721.96	6.58	715.38	0.0019	0.0180	
TG6-2	719.70	722.05	NM	--			
TG6-3	719.58	722.47	7.28	715.19			

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 well casing.
GW = Groundwater.
ft/day = feet per day.
ft/ft = feet per foot.
NM = Not Measured.
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 15 September 2009

Table 2-4
Groundwater Elevation Measurements
Piezometers and Staff Gauge
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Well ID	Ground Elevation	TOC Elevation	Depth to Water	Groundwater Elevation	Product Thickness
Groundwater					
PZ-01	718.04	721.05	6.09	714.96	None Detecteed
PZ-02	718.89	721.84	7.78	714.06	
PZ-03	719.00	722.09	7.25	714.84	
PZ-04	717.30	720.22	6.75	713.47	
PZ-05	724.34	727.43	9.02	718.41	
PZ-06	724.62	727.79	7.54	720.25	
PZ-07	725.78	728.72	6.85	721.87	
PZ-09	721.12	724.08	6.53	717.55	
PZ-10	722.04	725.05	6.87	718.18	

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

Depth to groundwater was measured on 15 September 2009

Table 2-5
Field-Measured Parameters
Shallow Groundwater and Containment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Well ID	Dissolved Oxygen (mg/L)	Redox Potential (mV)	pH (Standard Units)	Specific Conductance (mmho/cm)	Temperature (Deg C)	Turbidity (NTU)
MW-7S	NM	NM	7.05	1.224	6.45	31.3
MW-34S	NM	NM	NM	NM	NM	NM
MW-38S	NM	NM	7.13	1.437	6.75	8.02
MW-39S	NM	NM	7.11	1.194	5.74	9.09
MW-5S	0.72	-1.3	7.09	1.658	13.40	3.19
MW-7S	2.71	-24.6	7.35	1.183	13.67	7.60
MW-9S	1.06	7.7	7.05	1.073	13.90	1.48
MW-27S	0.81	-51.3	7.20	1.608	15.30	3.27
MW-30S	0.87	150.4	6.97	1.382	14.46	0.85
MW-31S	4.15	58.3	6.94	1.030	14.18	1.15
MW-32S	2.80	-1.7	7.06	1.087	15.43	2.57
MW-33S	3.24	-7.6	7.26	1.046	14.27	2.52
MW-34S	NM	NM	NM	NM	NM	NM
MW-35S	0.58	140.8	6.75	1.525	16.33	8.30
MW-37S	0.40	-62.1	7.30	0.920	16.56	0.65
MW-38S	NM	NM	7.25	1.314	13.44	4.70
MW-39S	0.92	112.2	7.08	1.227	15.88	3.60

Notes:
S - Shallow well.
TG - Treatment gate performance monitoring well.
NM - Not measured due to presence of a sheen or free product in well.
uohm/cm - microhms per centimeter
Deg C - Degrees Celcius
mV - millivolt
mg/L - milligram per liter
NTU - Nephelometric Turbidity unit

Table 2-5 (Continued)
Field-Measured Parameters
Shallow Groundwater and Containment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Well ID	Dissolved Oxygen (mg/L)	Redox Potential (mV)	pH (Standard Units)	Specific Conductance (mmho/cm)	Temperature (Deg C)	Turbidity (NTU)
TG1-1	NM	NM	NM	NM	NM	NM
TG1-3	1.11	-109.7	7.17	1.007	16.23	3.20
TG2-1	2.62	29.1	6.67	0.925	15.51	1.90
TG2-3	1.51	-38.6	7.15	1.011	17.83	0.70
TG3-1	3.64	13.0	7.09	0.971	17.42	1.50
TG3-3	0.94	-33.0	7.01	0.975	16.46	15.0
TG4-1	1.17	-35.7	7.17	1.017	15.55	3.30
TG4-3	3.14	-37.5	7.29	0.998	15.77	1.10
TG5-1	3.40	113.9	7.04	0.911	15.64	1.80
TG5-3	0.89	185.7	7.33	0.925	14.54	34.0
TG6-1	0.46	-76.6	7.16	1.062	16.40	2.31
TG6-3	2.08	41.2	6.92	1.124	15.50	0.41

Notes:
S - Shallow well.
TG - Treatment gate performance monitoring well.
NM - Not measured due to presence of a sheen or free product in well.
uohm/cm - microhms per centimeter
Deg C - Degrees Celcius
mV - millivolt
mg/L - milligram per liter
NTU - Nephelometric Turbidity unit

Table 2-6
Groundwater Sample Analytical Results
Moss-American Site
Milwaukee, Wisconsin
First Quarter 2009

Field Sample ID	MA1-MW7S-032509-01	MA1-MW34S-032509-02	MA1-MW38S-032509-04		
Location ID	MW-7S	MW-34S	MW-38S		
Sample Date	3/25/2009	3/25/2009	3/25/2009		
Unit	ug/l	ug/l	ug/l	WDNR PAL (UG/L)	WDNR ES (UG/L)
BTEX					
Benzene	**0.9 J**	**7**	**1.8**	0.5	5
Ethylbenzene	2.2	30	2	140	700
Toluene	0.2 U	1	0.2 U	68.6	343
Total Xylenes	2 J	69	1 J	124	650
PAHs					
Acenaphthene	5.6	2600	1.8 J	NA	NA
Acenaphthylene	6 U	320	6 U	NA	NA
Anthracene	0.023 U	**840**	0.021 U	600	3000
Benzo(a)anthracene	0.011 U	440	0.011 U	NA	NA
Benzo(a)pyrene	0.011 U	**160**	0.011 U	0.02	0.2
Benzo(b)fluoranthene	0.0091 U	**150**	0.0086 U	0.02	0.2
Benzo(g,h,i)perylene	0.068 U	55 U	0.064 U	NA	NA
Benzo(k)fluoranthene	0.0091 U	84	0.0086 U	NA	NA
Chrysene	0.05 U	**480**	0.043 U	0.02	0.2
Dibenz(a,h)anthracene	0.023 U	9 U	0.021 U	NA	NA
Fluoranthene	0.023 U	**3000**	0.021 U	80	400
Fluorene	0.9	**2500**	0.11 U	80	400
Indeno(1,2,3-cd)pyrene	0.045 U	83	0.043 U	NA	NA
Naphthalene	**22**	**14000**	**94**	8	40
Phenanthrene	0.045 U	6700	0.043 U	NA	NA
Pyrene	0.11 U	**2400**	0.11 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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-6 (Continued)
Groundwater Sample Analytical Results
Moss-American Site
Milwaukee, Wisconsin
First Quarter 2009

Field Sample ID	MA1-MW38S-032509-04-D	MA1-MW39S-032509-03		
Location ID	MW-38S	MW-39S		
Sample Date	3/25/2009	3/25/2009		
Unit	ug/l	ug/l	WDNR PAL (UG/L)	WDNR ES (UG/L)
BTEX				
Benzene	**1.9**	0.2 U	0.5	5
Ethylbenzene	2.2	0.2 J	140	700
Toluene	0.2 U	0.2 U	68.6	343
Total Xylenes	1 J	0.6 U	124	650
PAHs				
Acenaphthene	2.7	1.9 J	NA	NA
Acenaphthylene	6 U	5.5 U	NA	NA
Anthracene	0.022 U	0.11	600	3000
Benzo(a)anthracene	0.011 U	0.011 U	NA	NA
Benzo(a)pyrene	0.011 U	0.011 U	0.02	0.2
Benzo(b)fluoranthene	0.0087 U	0.0085 U	0.02	0.2
Benzo(g,h,i)perylene	0.065 U	0.064 U	NA	NA
Benzo(k)fluoranthene	0.0087 U	0.0085 U	NA	NA
Chrysene	0.044 U	0.042 U	0.02	0.2
Dibenz(a,h)anthracene	0.022 U	0.021 U	NA	NA
Fluoranthene	0.022 U	0.1 J	80	400
Fluorene	0.11 U	0.82	80	400
Indeno(1,2,3-cd)pyrene	0.044 U	0.042 U	NA	NA
Naphthalene	**140**	1.1 U	8	40
Phenanthrene	0.044 U	0.049 J	NA	NA
Pyrene	0.11 U	0.14 J	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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-7
Groundwater Sample Analytical Results
Shallow Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	MW-5S	MW-7S	MW-7S	MW-9S		
Field Sample ID	MA3-MW5S-091609-9	MA3-MW7S-091709-13	MA3-MW7S-091709-13-DP	MA3-MW9S-091809-8		
Sample Date	9/16/2009	9/17/2009	9/17/2009	9/18/2009	WDNR PAL (UG/L)	WDNR ES (UG/L)
Unit	ug/l	ug/l	ug/l	ug/l		
BTEX						
Benzene	0.2 U	**0.8 J**	**0.8 J**	0.2 U	0.5	5
Ethylbenzene	0.2 U	0.9 J	1.3	0.2 U	140	700
Toluene	0.2 U	1.4	0.2 U	0.2 U	68.6	343
Total Xylenes	0.6 U	1.3 J	1.5 J	0.6 U	124	650
PAHs						
Acenaphthene	0.52 U	5.3	5.1	0.51 U	NA	NA
Acenaphthylene	1.0 U	3.9 U	3.5 U	1.0 U	NA	NA
Anthracene	0.021 U	0.021 U	0.021 U	0.020 U	600	3000
Benzo(a)anthracene	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA
Benzo(a)pyrene	0.010 U	0.010 U	0.010 U	0.010 U	0.02	0.2
Benzo(b)fluoranthene	0.0083 U	0.0082 U	0.0082 U	0.0082 U	0.02	0.2
Benzo(g,h,i)perylene	0.062 U	0.062 U	0.062 U	0.061 U	NA	NA
Benzo(k)fluoranthene	0.0083 U	0.0082 U	0.0082 U	0.0082 U	NA	NA
Chrysene	0.062 U	0.062 U	0.062 U	0.061 U	0.02	0.2
Dibenz(a,h)anthracene	0.021 U	0.021 U	0.021 U	0.020 U	NA	NA
Fluoranthene	0.021 U	0.021 U	0.021 U	0.020 U	80	400
Fluorene	0.10 U	0.99	0.96	0.10 U	80	400
Indeno(1,2,3-cd)pyrene	0.042 U	0.041 U	0.041 U	0.041 U	NA	NA
Naphthalene	1.0 U	4.2	3.8	1.0 U	8	40
Phenanthrene	0.042 U	0.075 J	0.065 J	0.041 U	NA	NA
Pyrene	0.10 U	0.10 U	0.10 U	0.10 U	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-7 (Continued)
Groundwater Sample Analytical Results
Containment Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	MW-27S	MW-30S	MW-31S	MW-32S	MW-32S	WDNR	WDNR
Field Sample ID	MA3-MW27S-091609-3	MA3-MW30S-091809-13	MA3-MW31S-091609-6	MA3-MW32S-091609-1	MA3-MW32S-091609-1-DP	PAL	ES
Sample Date	9/16/2009	9/18/2009	9/16/2009	9/16/2009	9/16/2009	(UG/L)	(UG/L)
Unit	ug/l	ug/l	ug/l	ug/l	ug/l		
BTEX							
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	1.5 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	0.53 U	0.52 U	0.53 U	0.52 U	0.53 U	NA	NA
Acenaphthylene	1.1 U	1.0 U	1.1 U	1.0 U	1.1 U	NA	NA
Anthracene	0.021 U	0.021 U	0.026 J	0.021 U	0.021 U	600	3000
Benzo(a)anthracene	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	NA	NA
Benzo(a)pyrene	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.02	0.2
Benzo(b)fluoranthene	0.0085 U	0.0083 U	0.0084 U	0.0084 U	0.0085 U	0.02	0.2
Benzo(g,h,i)perylene	0.064 U	0.062 U	0.063 U	0.063 U	0.063 U	NA	NA
Benzo(k)fluoranthene	0.0085 U	0.0083 U	0.0084 U	0.0084 U	0.0085 U	NA	NA
Chrysene	0.064 U	0.062 U	0.063 U	0.063 U	0.063 U	0.02	0.2
Dibenz(a,h)anthracene	0.021 U	0.021 U	0.021 U	0.021 U	0.021 U	NA	NA
Fluoranthene	0.021 U	0.021 U	0.021 U	0.021 U	0.021 U	80	400
Fluorene	0.11 U	0.10 U	0.11 U	0.10 U	0.11 U	80	400
Indeno(1,2,3-cd)pyrene	0.043 U	0.041 U	0.042 U	0.042 U	0.042 U	NA	NA
Naphthalene	1.1 U	1.0 U	1.1 U	1.0 U	1.1 U	8	40
Phenanthrene	0.043 U	0.041 U	0.042 U	0.042 U	0.042 U	NA	NA
Pyrene	0.11 U	0.10 U	0.11 U	0.10 U	0.11 U	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-7 (Continued)
Groundwater Sample Analytical Results
Containment Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	MW-33S	MW-34S	MW-35S	MW-37S	MW-38S	MW-39S	WDNR PAL (UG/L)	WDNR ES (UG/L)
Field Sample ID	MA3-MW33S-091809-10	MA3-MW34S-091709-14	MA3-MW35S-091809-9	MA3-MW37S-091809-7	MA3-MW38S-091509-2	MA3-MW39S-091809-11		
Sample Date	9/18/2009	9/17/2009	9/18/2009	9/18/2009	9/15/2009	9/18/2009		
Unit	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		
BTEX								
Benzene	0.2 U	**7.4**	0.2 U	0.2 U	**1.9**	0.2 U	0.5	5
Ethylbenzene	0.5 J	29	0.2 U	0.2 U	1.4	0.2 U	140	700
Toluene	0.4 UJ	1.2	0.2 U	0.2 U	0.2 U	0.2 U	68.6	343
Total Xylenes	4.1	58	0.6 U	0.6 U	0.8 J	0.6 U	124	650
PAHs								
Acenaphthene	150	3800	0.51 U	0.52 U	3.4	2.2	NA	NA
Acenaphthylene	12 U	310	1.0 U	1.0 U	4.6 U	4.3 U	NA	NA
Anthracene	1.3	**1100**	0.080 U	0.023 J	0.021 U	0.14	600	3000
Benzo(a)anthracene	0.010 U	660	0.019 J	0.010 U	0.010 U	0.010 U	NA	NA
Benzo(a)pyrene	0.010 U	**240**	0.010 U	0.010 U	0.010 U	0.010 U	0.02	0.2
Benzo(b)fluoranthene	0.0081 U	**240**	0.0081 U	0.0083 U	0.0084 U	0.0083 U	0.02	0.2
Benzo(g,h,i)perylene	0.061 U	140	0.061 U	0.062 U	0.063 U	0.062 U	NA	NA
Benzo(k)fluoranthene	0.0081 U	130	0.0081 U	0.0083 U	0.0084 U	0.0083 U	NA	NA
Chrysene	0.061 U	**580**	**0.082 J**	0.062 U	0.063 U	0.062 U	0.02	0.2
Dibenz(a,h)anthracene	0.020 U	25	0.020 U	0.021 U	0.021 U	0.021 U	NA	NA
Fluoranthene	0.051 J	**4000**	0.51	0.060 J	0.021 U	0.18	80	400
Fluorene	77	**3600**	0.10 U	0.10 U	0.10 U	0.86	80	400
Indeno(1,2,3-cd)pyrene	0.041 U	100	0.041 U	0.041 U	0.042 U	0.042 U	NA	NA
Naphthalene	**76**	**18000**	1.0 U	1.0 U	**82**	1.0 U	8	40
Phenanthrene	31	9700	0.051 J	0.19 J	0.042 U	0.042 U	NA	NA
Pyrene	0.10 U	**3300**	0.34 J	0.10 U	0.10 U	0.13 J	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-7 (Continued)
Groundwater Sample Analytical Results
Treatment Performance Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	TG1-1	TG1-3	TG2-1	TG2-3	TG3-1	TG3-3	WDNR PAL (UG/L)	WDNR ES (UG/L)
Field Sample ID	MA3-TG1-1-091709-8	MA3-TG1-3-091709-9	MA3-TG2-1-091709-15	MA3-TG2-3-091709-12	MA3-TG3-1-091709-10	MA3-TG3-3-091709-11		
Sample Date	9/17/2009	9/17/2009	9/17/2009	9/17/2009	9/17/2009	9/17/2009		
Unit	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		
BTEX								
Benzene	0.2 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5	5
Ethylbenzene	27	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	140	700
Toluene	1.3	1.4	0.2 U	0.2 U	0.2 U	1 J	68.6	343
Total Xylenes	49	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs								
Acenaphthene	7700	2.9	0.51 U	0.51 U	0.51 U	0.53 U	NA	NA
Acenaphthylene	430	1.1 U	1.0 U	1.0 U	1.0 U	1.1 U	NA	NA
Anthracene	**1800**	0.16	0.029 J	0.020 U	0.020 U	0.031 J	600	3000
Benzo(a)anthracene	1200	0.011 U	0.010 U	0.024 J	0.010 U	0.011 U	NA	NA
Benzo(a)pyrene	**450**	0.011 U	0.010 U	**0.041**	0.010 U	0.011 U	0.02	0.2
Benzo(b)fluoranthene	**440**	0.0085 U	0.011 J	**0.042**	0.0081 U	0.0085 U	0.02	0.2
Benzo(g,h,i)perylene	280	0.064 U	0.061 U	0.070 J	0.061 U	0.063 U	NA	NA
Benzo(k)fluoranthene	240	0.0085 U	0.010 J	0.039	0.0081 U	0.0085 U	NA	NA
Chrysene	**950**	0.064 U	0.061 U	**0.062 J**	0.061 U	0.063 U	0.02	0.2
Dibenz(a,h)anthracene	45	0.021 U	0.020 U	0.048 J	0.020 U	0.021 U	NA	NA
Fluoranthene	**6700**	0.25	0.038 J	0.038 J	0.020 U	0.069 J	80	400
Fluorene	**6400**	1.6	0.13 J	0.10 U	0.10 U	0.13 J	80	400
Indeno(1,2,3-cd)pyrene	200	0.043 U	0.041 U	0.070 J	0.040 U	0.042 U	NA	NA
Naphthalene	**13000**	1.1 U	1.0 U	1.0 U	1.0 U	1.1 U	8	40
Phenanthrene	15000	0.59	0.21	0.041 U	0.054 J	0.077 J	NA	NA
Pyrene	**5300**	0.18 J	0.10 U	0.10 U	0.10 U	0.11 U	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-7 (Continued)
Groundwater Sample Analytical Results
Treatment Performance Monitoring Well Samples
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	TG4-1	TG4-3	TG5-1	TG5-3	TG6-1	TG6-3	WDNR PAL (UG/L)	WDNR ES (UG/L)
Field Sample ID	**MA3-TG4-1-091709-6**	**MA3-TG4-3-091709-7**	**MA3-TG5-1-091709-3**	**MA3-TG5-3-091709-4**	**MA3-TG6-1-091709-5**	**MA3-TG6-3-091709-1**		
Sample Date	**9/17/2009**	**9/17/2009**	**9/17/2009**	**9/17/2009**	**9/17/2009**	**9/17/2009**		
Unit	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**		
BTEX								
Benzene	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	140	700
Toluene	1.2	0.9 J	1.8	1.3	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	124	650
PAHs								
Acenaphthene	0.51 U	0.53 U	0.52 U	0.54 U	0.51 U	0.51 U	NA	NA
Acenaphthylene	1.0 U	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	NA	NA
Anthracene	0.020 U	0.021 U	0.021 U	0.022 U	0.027 J	0.023 J	600	3000
Benzo(a)anthracene	0.034 J	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U	NA	NA
Benzo(a)pyrene	**0.049**	0.011 U	0.010 U	0.011 U	0.010 U	0.010 U	0.02	0.2
Benzo(b)fluoranthene	**0.057**	0.0085 U	0.0084 U	0.0087 U	0.0090 J	0.0082 U	0.02	0.2
Benzo(g,h,i)perylene	0.061 U	0.064 U	0.063 U	0.065 U	0.062 U	0.061 U	NA	NA
Benzo(k)fluoranthene	0.050	0.0085 U	0.0084 U	0.0087 U	0.0082 U	0.0082 U	NA	NA
Chrysene	**0.087 J**	0.064 U	0.063 U	0.065 U	0.062 U	0.061 U	0.02	0.2
Dibenz(a,h)anthracene	0.042 J	0.021 U	0.021 U	0.022 U	0.021 U	0.020 U	NA	NA
Fluoranthene	0.020 U	0.021 U	0.021 U	0.059 J	0.038 J	0.070 J	80	400
Fluorene	0.10 U	0.11 U	0.10 U	0.11 U	0.13 J	0.10 U	80	400
Indeno(1,2,3-cd)pyrene	0.069 J	0.042 U	0.042 U	0.043 U	0.041 U	0.041 U	NA	NA
Naphthalene	1.0 U	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	8	40
Phenanthrene	0.041 U	0.042 U	0.042 U	0.043 U	0.041 U	0.041 U	NA	NA
Pyrene	0.10 U	0.11 U	0.10 U	0.11 U	0.10 U	0.10 U	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 2-7 (Continued)
Groundwater Sample Analytical Results
Field Blank and Trip Blank Samples
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank		
Field Sample ID	MA3-FB-091609-10	MA3-FB-091709-16	MA3-FB-091809-12	MA3-TB-091509-3	MA3-TB-091709-2	MA3-TB-091809-3		
Sample Date	9/16/2009	9/17/2009	9/18/2009	9/15/2009	9/17/2009	9/18/2009	WDNR PAL (UG/L)	WDNR ES (UG/L)
Unit	ug/l	ug/l		ug/l	ug/l			
BTEX								
Benzene	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	140	700
Toluene	1.2	0.2 U	0.6 J	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	124	650
PAHs								
Acenaphthene	0.54 U	0.51 U	0.51 U	--	--	--	NA	NA
Acenaphthylene	1.1 U	1.0 U	1.0 U	--	--	--	NA	NA
Anthracene	0.022 U	0.020 U	0.020 U	--	--	--	600	3000
Benzo(a)anthracene	0.011 U	0.010 U	0.010 U	--	--	--	NA	NA
Benzo(a)pyrene	0.011 U	0.010 U	0.010 U	--	--	--	0.02	0.2
Benzo(b)fluoranthene	0.0087 U	0.0082 U	0.0082 U	--	--	--	0.02	0.2
Benzo(g,h,i)perylene	0.065 U	0.061 U	0.061 U	--	--	--	NA	NA
Benzo(k)fluoranthene	0.0087 U	0.0082 U	0.0082 U	--	--	--	NA	NA
Chrysene	0.065 U	0.061 U	0.061 U	--	--	--	0.02	0.2
Dibenz(a,h)anthracene	0.022 U	0.020 U	0.020 U	--	--	--	NA	NA
Fluoranthene	0.022 U	0.020 U	0.020 U	--	--	--	80	400
Fluorene	0.11 U	0.10 U	0.10 U	--	--	--	80	400
Indeno(1,2,3-cd)pyrene	0.043 U	0.041 U	0.041 U	--	--	--	NA	NA
Naphthalene	1.1 U	1.0 U	1.0 U	--	--	--	8	40
Phenanthrene	0.043 U	0.041 U	0.041 U	--	--	--	NA	NA
Pyrene	0.11 U	0.10 U	0.10 U	--	--	--	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.
-- = Not analyzed

Table 2-8
Concentration Trends in Groundwater Monitoring Wells
Fourth Quarter 2003 through Third Quarter 2008
Moss-American Site
Milwaukee, Wisconsin

	MW-7S	MW-32S	MW-33S	MW-34S	MW-35S	TG1-1
Benzene (ug/L)						
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
Third Quarter (September '05)	1.8	0.2 U	0.2 U	7.3	0.2 U	0.8 J
Fourth Quarter (December '05)	1.7 J	0.2 U	0.2 U	5.0 J	0.2 U	1.0 U
First Quarter (March '06)	2.0 U	0.2 U	0.2 U	7.4 J	0.2 U	0.6 J
Second Quarter (June '06)	0.2 U	0.2 U	0.2 U	6.9 J	0.2 U	1.0 U
Third Quarter (September '06)	1.5 J	0.2 U	0.2 U	6.6 J	0.2 U	0.3 J
First Quarter (March '07)	1.0 U	--	--	8.0 J	--	--
Third Quarter (September '07)	1 J	0.2 U	0.2 U	5.6	1 U	5 U
First Quarter (March '08)	0.7 J	--	--	8.2	--	--
Third Quarter (September '08)	0.6 J	0.2 U	0.2 U	5.8	0.2 U	0.2 U
First Quarter (March '09)	0.9	--	--	7	--	--
Third Quarter (September '09)	1 J	0.2 U	0.2 U	5.6	1 U	5 U
Naphthalene (ug/L)						
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
Third Quarter (September '05)	1,900	1.7 U	290	6,900	1.7 U	4,000
Fourth Quarter (December '05)	1,000	1.8 U	27	4,400 J	1.7 U	4,300
First Quarter (March '06)	1,000	1.5 U	1.7 U	6,400	2.0 J	3,200
Second Quarter (June '06)	1.4 U	1.4 U	7.1 J	6,500	1.4 U	1,100
Third Quarter (September '06)	850	1.3 U	12 J	23,000	1.2 UJ	2,200
First Quarter (March '07)	510	--	--	10,000	--	--
Third Quarter (September '07)	280	0.55 U	0.55 U	6,100	2.2 U	7,000
First Quarter (March '08)	1.1 U	--	--	4,600	--	--
Third Quarter (September '08)	31	1.1 U	76	7,200	1.1 U	4,500
First Quarter (March '09)	22	--	--	14,000	--	--
Third Quarter (September '09)	280	0.55 U	0.5 U	6,100	2.2 U	7,000

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

Table 2-8 (Continued)
Concentration Trends in Groundwater Monitoring Wells
Fourth Quarter 2003 through Third Quarter 2008
Moss-American Site
Milwaukee, Wisconsin

Fluorene (ug/L)	MW-7S	MW-32S	MW-33S	MW-34S	MW-35S	TG1-1
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	2,100 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	2500
Second Quarter (June '05)	6.3	0.52 U	48	640	0.5 U	320
Third Quarter (September '05)	5.8	0.53 U	56	440	0.53 U	1100
Fourth Quarter (December '05)	4.2	0.56 U	3.0	94 J	0.52 U	2100
First Quarter (March '06)	4.0	0.48 U	1.2	93	0.50 U	750
Second Quarter (June '06)	0.53 U	0.56 U	38	110	0.54 U	160 J
Third Quarter (September '06)	4.6	0.50 U	61	5100	0.48 UJ	740
First Quarter (March '07)	2.6	--	--	1700	--	--
Third Quarter (September '07)	2	0.55 U	5.9	90	0.89 U	3600
First Quarter (March '08)	1.1	--	--	160	--	--
Third Quarter (September '08)	1	0.11 U	72	240	0.12 J	1600
First Quarter (March '09)	0.9	--	--	2,500	--	--
Third Quarter (September '09)	2	0.55 U	5.9	90	0.89	3,600
Benzo(a) pyrene (ug/L)						
Fourth Quarter (December '03)	0.019 U	0.02 U	0.02 U	5.9 J	0.028 J	6
First Quarter (March '04)	0.019 U	0.02 UJ	0.02 UJ	29	0.02 U	6
Second Quarter (June '04)	0.019 U	0.019 U	0.019 U	17	0.022 J	5
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
Third Quarter (September '05)	0.021 U	0.021 U	0.021 U	23	0.021 U	91
Fourth Quarter (December '05)	0.021 U	0.022 U	0.024 U	0.55 J	0.021 U	180
First Quarter (March '06)	0.020 U	0.019 U	0.021 U	0.24	0.020 U	63
Second Quarter (June '06)	0.021 U	0.022 U	0.021 U	0.18	0.022 U	5.6 J
Third Quarter (September '06)	0.019 U	0.020 U	0.020 U	370	0.064 J-	51
First Quarter (March '07)	0.023 U	--	--	320	--	--
Third Quarter (September '07)	0.022 U	0.022 U	0.022 U	0.12	0.11 U	270
First Quarter (March '08)	0.011 U	--	--	6	--	--
Third Quarter (September '08)	0.011 U	0.011 U	0.010 U	8	0.011 U	110
First Quarter (March '09)	0.011 U	--	--	160	--	--
Third Quarter (September '09)	0.022 U	0.022 U	0.022 U	0.12	0.11 U	2,700

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

Table 2-9
Groundwater Sample Analytical Results
Treatment Performance Monitoring Wells- Nutrient and Biological Parameters
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Parameter (mg/L)	Sample Indentification					
	TG1-1	TG1-3	TG2-1	TG2-3	TG3-1	TG3-3
Nitrogen (Kjeldahl)	1.4	1.9	0.50 U	0.69 J	0.87 J	1.7
Nitrite Nitrogen	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.017 J
Nitrate Nitrogen	4.0 U	0.20 U	0.040 U	0.040 U	0.044 J	0.20 U
Ammonia Nitrogen	0.20 U	0.50 J	0.20 U	0.42 J	0.20 U	0.20 U
Ortho-Phosphate as P	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Biochemical oxygen demand	15.5	13.3	3.2 U	8.6	3.1 U	19.8
Chemical oxygen demand	294	28.0	6.1 J	22.7	25.8	25.4
Total Organic Carbon	11.1	11.2	2.2	9.5	10.3	9.4
Total Phosphorus as PO4	13.0	0.25 U	0.25 U	0.27 J	0.25 U	0.25 U
Degrader Microbial Population (mean) (CFU/ml)	7400	<100	<100	<100	<100	<100
Total Microbial Population (mean) (CFU/ml)	57000	15300	310	630	900	420

Parameter (mg/L)	Sample Indentification					
	TG4-1	TG4-3	TG5-1	TG5-3	TG6-1	TG6-3
Nitrogen (Kjeldahl)	0.50 U	0.80 J	0.50 U	0.50 U	1.8	0.50 U
Nitrite Nitrogen	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U
Nitrate Nitrogen	0.20 U	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
Ammonia Nitrogen	0.20 U	0.38 J	0.24 J	0.47 J	0.65	0.53 J
Ortho-Phosphate as P	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Biochemical oxygen demand	2.7 U	2.0 U	1.6 U	2.3 U	11.8	2.2 U
Chemical oxygen demand	20.5	25.0	10.2	13.6	25.8	17.0
Total Organic Carbon	8.1	9.3	3.8	4.9	10.3	6.9
Total Phosphorus as PO4	0.25 U	0.25 U	0.25 U	0.25 U	0.30 J	0.25 U
Degrader Microbial Population (mean) (CFU/ml)	<100	<100	<100	<100	<100	<100
Total Microbial Population (mean) (CFU/ml)	18900	<100	210	1000	450	<100

U Constituent not detected. Detection limit indicated.
J Estimated concentration.

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 Q3 2009, the DO concentrations were found to range from 0.4 to 4.15 mg/L. The majority of the DO concentrations were found to be between 0 and 1 mg/L. DO measurements in the downgradient treatment gate wells ranged from 0.46 to 3.40 mg/L.

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. TRONOX/WESTON attempted to install inflatable bladder packers in the TG1 and TG2 injection wells in August 2001. However, the packers could not be properly installed due to the injection well configuration.

TRONOX/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 (6.69 to 7.51 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 Q3 2009, treatment performance monitoring wells only well TG6-1 approximately exhibited the desired C:N:P ration of 100:14:1. However, the remaining treatment performance monitoring wells did not exhibit this desired ratio. Nitrogen and phosphorous appear to be the limiting nutrients at the site.

3.3 BACTERIAL POPULATIONS

Total bacterial counts were found, in general, to have decreased in TG2-3, TG4-3 and TG6-1 from Q3 2008. Total bacterial counts increased in TG1-1, TG1-3, TG2-1, TG3-1, TG4-1, TG5-1, TG5-3, and TG6-3 from Q3 2008 levels. There was no change in total bacterial counts for TG3-3 and TG6-3 from Q3 2008. Degrader bacterial counts in each of the treatment gate monitoring wells were found to generally decrease or remain steady from Q3 2008. However, the degrader bacterial count in TG1-1 significantly increased from Q3 2008.

Figure 3-1 compares the degrader populations in TG1 and TG2 since Q1 2001. As indicated in Figure 3-1, there was a trend of general decrease in the degrader bacterial population levels in TG1 and TG2 from Q1 2001 to Q2 2004. It is uncertain what the cause of this bacterial decrease at the site was. However, the degrader populations appear to be increasing over the recent sampling quarters.

3.4 HYDROGEOLOGY

TRONOX/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 TRONOX/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 Q3 2009.

Figure 3-1

Comparison of Degrader Populations in Treament Gates 1 and 2 since Q1 2001
Moss-American Site
Milwaukee, Wisconsin

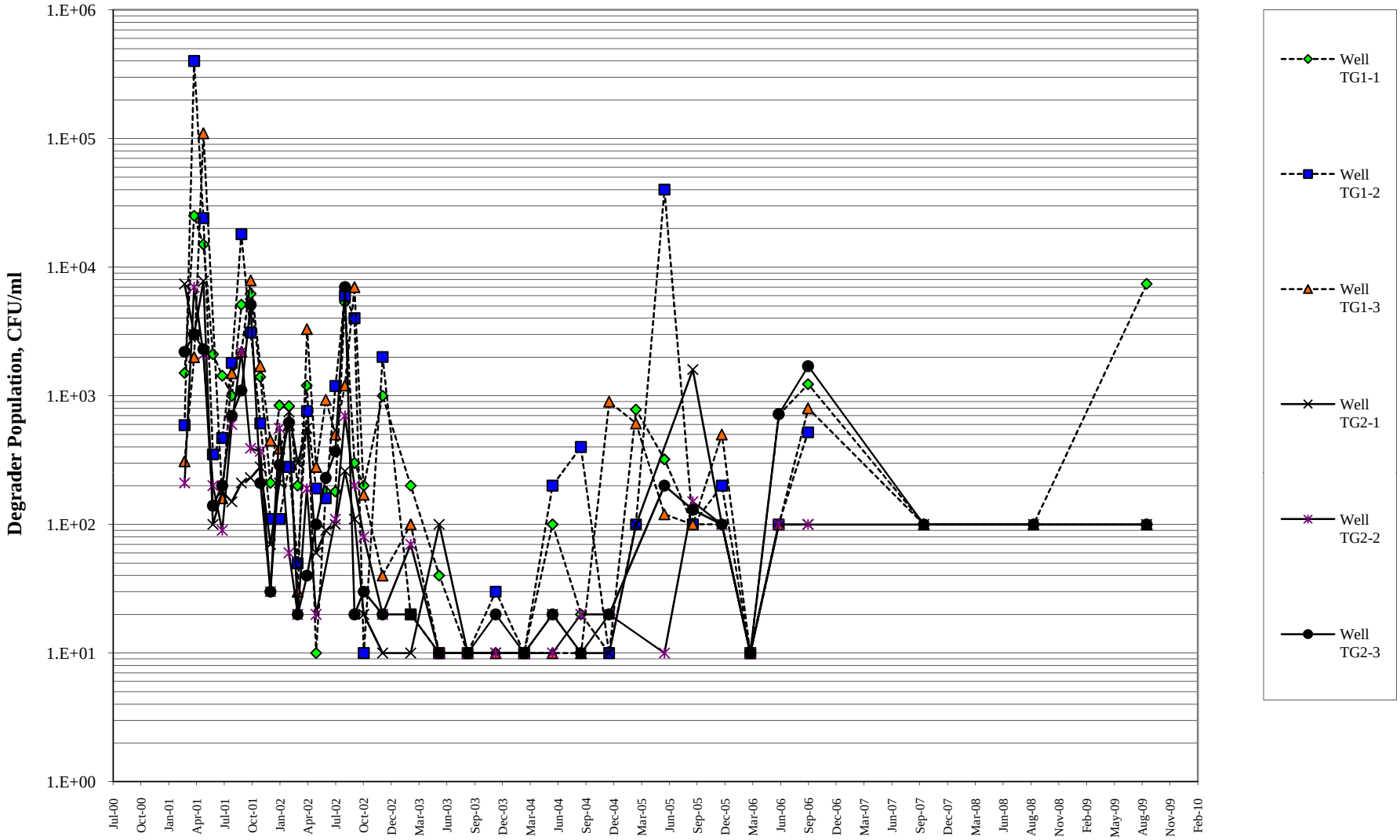

Table 3-1
Calculation of Carbon:Nitrogen:Phosphorous Ratios
Treatment Performance Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Well	Carbon[1], mg/L	Total Nitrogen[2], mg/L	Phosphorous[3], mg/L	C-N-P Ratio (100-14-1 desired)		
TG1-1	11.1	ND	13	100	0.0	117.1
TG1-3	11.2	0.5	ND	100	4.5	0
TG2-1	2.2	ND	ND	100	0	0
TG2-3	9.5	0.42	0.27	100	4.4	2.8
TG3-1	10.3	ND	ND	100	0.0	0.0
TG3-3	9.4	0.017	ND	100	0.18	0.0
TG4-1	8.1	ND	ND	100	0	0.0
TG4-3	9.3	0.38	ND	100	4.1	0.0
TG5-1	3.8	0.24	ND	100	6.3	0.0
TG5-3	4.9	0.47	ND	100	10	0.0
TG6-1	10.3	0.65	0.3	100	6.3	2.9
TG6-3	6.9	ND	ND	100	0.0	0.0

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.

4. REACH 1, 2 AND 3 GROUNDWATER MONITORING RESULTS

The September 2009 groundwater-monitoring event included the annual sampling event of the Reach 1, 2, and 3 monitoring well network at the Moss-American site. These monitoring wells include MW-A, through MW-K and are shown in Figures 1-2 through 1-4. Monitoring wells MW-A through MW-D were first sampled in September 2003 during the on-site Q3 2003 groundwater sampling event. The September 2005 Q3 sampling event was the first time monitoring wells MW-E through MW-K were sampled. Similar to the on-site wells, groundwater elevation measurements were collected from the Reach 1, 2, and 3 monitoring wells prior to sampling each monitoring well and groundwater elevations are presented on Table 4-1. DO measurements were also collected following the purging and sampling of each well.

The results of the annual Reach 1, 2, and 3 groundwater sampling event are described in the following subsections.

4.1 GROUNDWATER SAMPLE ANALYTICAL RESULTS

Groundwater samples were collected from a total of 11 Reach 1, 2, and 3 monitoring wells: MW-A through MW-K. One duplicate sample was collected from the Reach 1, 2, and 3 monitoring wells for quality control purposes. The QA/QC samples were collected in conjunction with the on-site groundwater monitoring network sampling effort.

4.1.5 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 Hanna HI98703 turbidimeter. Downhole DO readings were collected from each monitoring well subsequent to purging and sampling the well. 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 4-2.

4.1.6 Laboratory Analyses

Each groundwater sample collected from the Reach 1, 2, and 3 monitoring well network during the September 2009 sampling event was analyzed for BTEX and PAH compounds. PAHs were detected in monitoring wells MW-I and MW-K. Benzo(b)fluoranthene and fluoranthene were detected at very low, estimated concentrations in MW-I. Benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, fluoranthene, indeno(1,2,3-cd)pyrene, and phenanthrene were detected at very low, estimated concentrations in MW-K. Of these detections, benzo(k)fluoranthene was detected at a concentration of 0.028 ug/L, slightly above the PAL level of 0.02 in MW-K. Only sporadic detections of BTEX and PAH constituents have been documented from the 2004 through the 2009 sampling events of the Reach 1, 2, and 3 monitoring wells. Based on the above observations, the Reach 1, 2, and 3 monitoring wells continue to demonstrate an overall effectiveness of the remedy. Future annual sampling event data will be evaluated to determine any changes or trends in the data. The results of the laboratory analyses performed on the Reach 1, 2, and 3 groundwater samples collected during September 2009 are provided in Appendix A.

Table 4-1
Groundwater Elevation Measurements
Reach 1, 2, and 3 Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Well ID	Ground Elevation	TOC Elevation	Depth to Water	Groundwater Elevation	Product Thickness
MW-A	716.73	716.15	3.9	712.25	None Detected
MW-B	714.92	714.49	2.21	712.28	
MW-C	714.18	713.82	3.71	710.11	
MW-D	716.21	715.85	2.59	713.26	
MW-E	713.26	712.83	1.97	710.86	
MW-F	713.52	713.10	5.02	708.08	
MW-G	713.21	712.75	5.57	707.18	
MW-H	710.40	710.07	2.82	707.25	
MW-I	710.27	709.92	3.87	706.05	
MW-J	710.08	709.85	3.3	706.55	
MW-K	707.13	706.70	1.8	704.90	

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 15 through 18 September 2009

Table 4-2
Field-Measured Parameters
Reaches 1, 2, and 3 Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Well ID	Dissolved Oxygen (mg/L)	Redox Potential (mV)	pH (Standard Units)	Specific Conductance (mmho/cm)	Temperature (Deg C)	Turbidity (NTU)
MW-A	0.74	26.3	6.94	1.189	13.64	2.80
MW-B	0.60	-64.8	7.06	2.067	12.70	2.20
MW-C	1.55	-18.8	7.72	0.983	12.30	12.30
MW-D	0.96	63.5	6.80	2.974	12.77	9.90
MW-E	NA	NA	7.45	0.935	13.80	48.70
MW-F	1.17	23.3	7.10	1.828	12.18	12.00
MW-G	0.57	-32.2	7.29	1.634	13.77	4.30
MW-H	1.34	-62.2	7.28	1.489	12.25	4.70
MW-I	0.79	-67.8	7.24	1.413	14.84	5.40
MW-J	2.45	82.8	7.16	1.395	11.53	18.00
MW-K	1.43	-46.6	7.40	1.392	14.83	50.00

Notes:
S - Shallow well.
TG - Treatment gate performance monitoring well.
NM - Not measured due to presence of a sheen or free product in well.
uohm/cm - microhms per centimeter
Deg C - Degrees Celcius
mV - millivolt
mg/L - milligram per liter
NTU - Nephelometric Turbidity unit
NA - Not measured due to low water level in well.

Table 4-3
Groundwater Sample Analytical Results
Reach 1, 2, and 3 Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	MW-A	MW-B	MW-C	MW-C	WDNR PAL (UG/L)	WDNR ES (UG/L)
Field Sample ID	MA3-MWA-091809-6	MA3-MWB-091809-2	MA3-MWC-091809-1	MA3-MWC-091809-1-DP		
Sample Date	9/18/2009	9/18/2009	9/18/2009	9/18/2009		
Unit	ug/l	ug/l	ug/l	ug/l		
BTEX						
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	0.52 U	0.52 U	0.51 U	0.51 U	NA	NA
Acenaphthylene	1.0 U	1.0 U	1.0 U	1.0 U	NA	NA
Anthracene	0.021 U	0.021 U	0.020 U	0.020 U	600	3000
Benzo(a)anthracene	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA
Benzo(a)pyrene	0.010 U	0.010 U	0.010 U	0.010 U	0.02	0.2
Benzo(b)fluoranthene	0.0083 U	0.0083 U	0.0082 U	0.0081 U	0.02	0.2
Benzo(g,h,i)perylene	0.062 U	0.062 U	0.061 U	0.061 U	NA	NA
Benzo(k)fluoranthene	0.0083 U	0.0083 U	0.0082 U	0.0081 U	NA	NA
Chrysene	0.062 U	0.062 U	0.061 U	0.061 U	0.02	0.2
Dibenz(a,h)anthracene	0.021 U	0.021 U	0.020 U	0.020 U	NA	NA
Fluoranthene	0.021 U	0.021 U	0.020 U	0.020 U	80	400
Fluorene	0.10 U	0.10 U	0.10 U	0.10 U	80	400
Indeno(1,2,3-cd)pyrene	0.041 U	0.041 U	0.041 U	0.041 U	NA	NA
Naphthalene	1.0 U	1.0 U	1.0 U	1.0 U	8	40
Phenanthrene	0.041 U	0.041 U	0.041 U	0.041 U	NA	NA
Pyrene	0.10 U	0.10 U	0.10 U	0.10 U	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 4-3 (Continued)
Groundwater Sample Analytical Results
Reach 1, 2, and 3 Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	MW-D	MW-E	MW-F	MW-F		
Field Sample ID	MA3-MWD-091809-4	MA3-MWE-091809-5	MA3-MWF-091609-8	MA3-MWF-091609-8-DP		
Sample Date	9/18/2009	9/18/2009	9/16/2009	9/16/2009	WDNR PAL (UG/L)	WDNR ES (UG/L)
Unit	ug/l	ug/l	ug/l	ug/l		
BTEX						
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	1.6 U	1.5 U	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs						
Acenaphthene	0.52 U	0.53 U	0.53 U	0.53 U	NA	NA
Acenaphthylene	1.0 U	1.1 U	1.1 U	1.1 U	NA	NA
Anthracene	0.021 U	0.021 U	0.021 U	0.021 U	600	3000
Benzo(a)anthracene	0.010 U	0.011 U	0.011 U	0.011 U	NA	NA
Benzo(a)pyrene	0.010 U	0.011 U	0.011 U	0.011 U	0.02	0.2
Benzo(b)fluoranthene	0.0083 U	0.0084 U	0.0086 U	0.0085 U	0.02	0.2
Benzo(g,h,i)perylene	0.062 U	0.063 U	0.064 U	0.064 U	NA	NA
Benzo(k)fluoranthene	0.0083 U	0.0084 U	0.0086 U	0.0085 U	NA	NA
Chrysene	0.062 U	0.063 U	0.064 U	0.064 U	0.02	0.2
Dibenz(a,h)anthracene	0.021 U	0.021 U	0.021 U	0.021 U	NA	NA
Fluoranthene	0.021 U	0.021 U	0.021 U	0.021 U	80	400
Fluorene	0.10 U	0.11 U	0.11 U	0.11 U	80	400
Indeno(1,2,3-cd)pyrene	0.041 U	0.042 U	0.043 U	0.043 U	NA	NA
Naphthalene	1.0 U	1.1 U	1.1 U	1.1 U	8	40
Phenanthrene	0.041 U	0.042 U	0.043 U	0.043 U	NA	NA
Pyrene	0.10 U	0.11 U	0.11 U	0.11 U	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

Table 4-3 (Continued)
Groundwater Sample Analytical Results
Reach 1, 2, and 3 Monitoring Wells
Moss-American Site
Milwaukee, Wisconsin
Third Quarter 2009

Location ID	MW-G	MW-H	MW-I	MW-J	MW-K		
Field Sample ID	MA3-MWG-091609-7	MA3-MWH-091609-5	MA3-MWI-091609-4	MA3-MWJ-091609-2	MA3-MWK-091509-1		
Sample Date	9/16/2009	9/16/2009	9/16/2009	9/16/2009	9/15/2009	WDNR PAL (UG/L)	WDNR ES (UG/L)
Unit	ug/l	ug/l	ug/l	ug/l	ug/l		
BTEX							
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	1.1 U	0.2 U	0.2 U	1.2 U	0.3 UJ	68.6	343
Total Xylenes	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	124	650
PAHs							
Acenaphthene	0.53 U	0.53 U	0.53 U	0.56 U	0.54 U	NA	NA
Acenaphthylene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	NA	NA
Anthracene	0.021 U	0.021 U	0.021 U	0.022 U	0.022 U	600	3000
Benzo(a)anthracene	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	NA	NA
Benzo(a)pyrene	0.011 U	0.011 U	0.011 U	0.011 U	0.017 J	0.02	0.2
Benzo(b)fluoranthene	0.0085 U	0.0085 U	0.015 J	0.0089 U	**0.028 J**	0.02	0.2
Benzo(g,h,i)perylene	0.064 U	0.063 U	0.063 U	0.067 U	0.069 J	NA	NA
Benzo(k)fluoranthene	0.0085 U	0.0085 U	0.0085 U	0.0089 U	0.011 J	NA	NA
Chrysene	0.064 U	0.063 U	0.063 U	0.067 U	0.065 U	0.02	0.2
Dibenz(a,h)anthracene	0.021 U	0.021 U	0.021 U	0.022 U	0.022 U	NA	NA
Fluoranthene	0.021 U	0.021 U	0.027 J	0.022 U	0.044 J	80	400
Fluorene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	80	400
Indeno(1,2,3-cd)pyrene	0.043 U	0.042 U	0.042 U	0.044 U	0.052 J	NA	NA
Naphthalene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	8	40
Phenanthrene	0.043 U	0.042 U	0.042 U	0.044 U	0.045 J	NA	NA
Pyrene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	50	250

U - Constituent not detected. Detection limit indicated.
J - Estimated concentration.
J- - Estimated concentration, biased low.
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.
Bolded values indicate concentration exceeding PAL.
Shaded and bolded values indicate concentration exceeding PAL and ES.

5. 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.

WESTON. 2007. *Quarterly Groundwater Treatment Performance Monitoring Report, Q1 2007, Moss-American Site, Milwaukee, Wisconsin*. May 2007.

APPENDIX A

March and September 2009 Groundwater Sample Analytical Results

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Tronox LLC
P.O. Box 268859
Oklahoma City OK 73126-8859

405-775-5429

Prepared by:

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

April 07, 2009

SAMPLE GROUP

The sample group for this submittal is 1137750. Samples arrived at the laboratory on Thursday, March 26, 2009. The PO# for this group is ZAKW1KEOK0A90089.

Client Description	Lancaster Labs Number
MA1-MW7S-032509-01BKG Groundwater	5632276
MA1-MW7S-032509-01MS Groundwater	5632277
MA1-MW7S-032509-01MSD Groundwater	5632278
MA1-MW34S-032509-02 Groundwater	5632279
MA1-MW39S-032509-03 Groundwater	5632280
MA1-MW38S-032509-04 Groundwater	5632281
MA1-TB-032509-05 Groundwater	5632282
MA1-MW38S-032509-04-DUP Groundwater	5632283

METHODOLOGY

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

ELECTRONIC COPY TO	Tronox LLC	Attn: Keith Watson
ELECTRONIC COPY TO	Weston Solutions, Inc.	Attn: Tom Graan
ELECTRONIC COPY TO	Tronox LLC	Attn: Sherron Hendricks

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ELECTRONIC COPY TO Tronox LLC Attn: Roy Widmann

1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300

Respectfully Submitted,

Chad A. Moline
Group Leader

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5632276

Group No. 1137750
WI

MA1-MW7S-032509-01BKG Groundwater
0128730, 204110 02687.007.007.0001
Moss American

Collected: 03/25/2009 12:04

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
P.O. Box 268859
Oklahoma City OK 73126-8859

MOS7S SDG#: KMA97-01BKG

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
SW-846 8310	**GC/MS Semivolatiles**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	5.6		0.57	1
00774	Acenaphthylene	208-96-8	N.D.		6.0	1
00774	Anthracene	120-12-7	N.D.		0.023	1
00774	Benzo(a)anthracene	56-55-3	N.D.		0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.		0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.		0.0091	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.		0.068	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.		0.0091	1
00774	Chrysene	218-01-9	N.D.		0.050	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.		0.023	1
00774	Fluoranthene	206-44-0	N.D.		0.023	1
00774	Fluorene	86-73-7	0.90		0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.045	1
00774	Naphthalene	91-20-3	22		1.1	1
00774	Phenanthrene	85-01-8	N.D.		0.045	1
00774	Pyrene	129-00-0	N.D.		0.11	1

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

Due to the presence of interferents near their retention times, normal reporting limits were not attained for several target compounds. The reporting limits for these compounds were raised accordingly.

SW-846 8021B	**GC Volatiles**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	0.9	J	0.2	1
08213	Ethylbenzene	100-41-4	2.2		0.2	1
08213	Toluene	108-88-3	N.D.		0.2	1
08213	Total Xylenes	1330-20-7	2.0	J	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/03/2009 11:48	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09086WAA026	03/27/2009 16:40	JoElla L Rice	1
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 17:42	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 17:42	Carrie E Youtzy	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5632277

Group No. 1137750
WI

MA1-MW7S-032509-01MS Groundwater
0128730, 204110 02687.007.007.0001
Moss American

Collected: 03/25/2009 12:04

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
P.O. Box 268859
Oklahoma City OK 73126-8859

MOS7S SDG#: KMA97-01MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8310	**GC/MS Semivolatiles**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	110	0.57	1
00774	Acenaphthylene	208-96-8	220	1.1	1
00774	Anthracene	120-12-7	3.2	0.023	1
00774	Benzo(a)anthracene	56-55-3	1.5	0.011	1
00774	Benzo(a)pyrene	50-32-8	1.6	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	1.2	0.0091	1
00774	Benzo(g,h,i)perylene	191-24-2	12	0.068	1
00774	Benzo(k)fluoranthene	207-08-9	1.3	0.0091	1
00774	Chrysene	218-01-9	6.2	0.045	1
00774	Dibenz(a,h)anthracene	53-70-3	3.1	0.023	1
00774	Fluoranthene	206-44-0	3.2	0.023	1
00774	Fluorene	86-73-7	24	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	6.8	0.045	1
00774	Naphthalene	91-20-3	230	1.1	1
00774	Phenanthrene	85-01-8	6.8	0.045	1
00774	Pyrene	129-00-0	22	0.11	1

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

SW-846 8021B	**GC Volatiles**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	22	0.2	1
08213	Ethylbenzene	100-41-4	25	0.2	1
08213	Toluene	108-88-3	23	0.2	1
08213	Total Xylenes	1330-20-7	71	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/03/2009 12:26	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09086WAA026	03/27/2009 16:40	JoElla L Rice	1
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 18:09	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 18:09	Carrie E Youtzy	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5632278

Group No. 1137750
WI

MA1-MW7S-032509-01MSD Groundwater
0128730, 204110 02687.007.007.0001
Moss American

Collected: 03/25/2009 12:04

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
P.O. Box 268859
Oklahoma City OK 73126-8859

MOS7S SDG#: KMA97-01MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8310	**GC/MS Semivolatiles**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	110	0.57	1
00774	Acenaphthylene	208-96-8	210	1.1	1
00774	Anthracene	120-12-7	3.2	0.023	1
00774	Benzo(a)anthracene	56-55-3	1.5	0.011	1
00774	Benzo(a)pyrene	50-32-8	1.6	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	1.2	0.0091	1
00774	Benzo(g,h,i)perylene	191-24-2	12	0.068	1
00774	Benzo(k)fluoranthene	207-08-9	1.3	0.0091	1
00774	Chrysene	218-01-9	6.2	0.045	1
00774	Dibenz(a,h)anthracene	53-70-3	3.1	0.023	1
00774	Fluoranthene	206-44-0	3.2	0.023	1
00774	Fluorene	86-73-7	24	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	6.8	0.045	1
00774	Naphthalene	91-20-3	220	1.1	1
00774	Phenanthrene	85-01-8	6.8	0.045	1
00774	Pyrene	129-00-0	22	0.11	1

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

SW-846 8021B	**GC Volatiles**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	22	0.2	1
08213	Ethylbenzene	100-41-4	25	0.2	1
08213	Toluene	108-88-3	23	0.2	1
08213	Total Xylenes	1330-20-7	72	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/03/2009 13:05	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09086WAA026	03/27/2009 16:40	JoElla L Rice	1
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 18:36	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 18:36	Carrie E Youtzy	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5632279

Group No. 1137750
WI

MA1-MW34S-032509-02 Groundwater
0128730 02687.007.007.0001
Moss American

Collected: 03/25/2009 13:14

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
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Oklahoma City OK 73126-8859

MO34S SDG#: KMA97-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8310	**GC/MS Semivolatiles**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	2,600	11	20
00774	Acenaphthylene	208-96-8	320	21	20
00774	Anthracene	120-12-7	840	8.5	400
00774	Benzo(a)anthracene	56-55-3	440	4.2	400
00774	Benzo(a)pyrene	50-32-8	160	4.2	400
00774	Benzo(b)fluoranthene	205-99-2	150	3.4	400
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	55	20
00774	Benzo(k)fluoranthene	207-08-9	84	3.4	400
00774	Chrysene	218-01-9	480	17	400
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	9.0	20
00774	Fluoranthene	206-44-0	3,000	8.5	400
00774	Fluorene	86-73-7	2,500	42	400
00774	Indeno(1,2,3-cd)pyrene	193-39-5	83	0.85	20
00774	Naphthalene	91-20-3	14,000	420	400
00774	Phenanthrene	85-01-8	6,700	42	1000
00774	Pyrene	129-00-0	2,400	42	400

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

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.

Due to the presence of interferents near their retention times, normal reporting limits were not attained for several target compounds. The reporting limits for these compounds were raised accordingly.

SW-846 8021B	**GC Volatiles**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	7.0	0.2	1
08213	Ethylbenzene	100-41-4	30	0.2	1
08213	Toluene	108-88-3	1.0	0.2	1
08213	Total Xylenes	1330-20-7	69	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/06/2009 06:29	Mark A Clark	20
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/06/2009 07:15	Mark A Clark	400
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/06/2009 21:36	Mark A Clark	1000

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Analysis Report

Lancaster Laboratories Sample No. WW 5632279

Group No. 1137750
WI

MA1-MW34S-032509-02 Groundwater
0128730 02687.007.007.0001
Moss American

Collected: 03/25/2009 13:14

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

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Oklahoma City OK 73126-8859

MO34S SDG#: KMA97-02

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03337	PAH Water Extraction	SW-846 3510C	1	09086WAA026	03/27/2009 16:40	JoElla L Rice	1
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 21:44	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 21:44	Carrie E Youtzy	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5632280

Group No. 1137750
WI

MA1-MW39S-032509-03 Groundwater
0128730 02687.007.007.0001
Moss American

Collected: 03/25/2009 13:33

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
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MO39S SDG#: KMA97-03

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
SW-846 8310	**GC/MS Semivolatiles**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	1.9	J	0.53	1
00774	Acenaphthylene	208-96-8	N.D.		5.5	1
00774	Anthracene	120-12-7	0.11		0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.		0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.		0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.		0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.		0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.		0.0085	1
00774	Chrysene	218-01-9	N.D.		0.042	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.		0.021	1
00774	Fluoranthene	206-44-0	0.10	J	0.021	1
00774	Fluorene	86-73-7	0.82		0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.042	1
00774	Naphthalene	91-20-3	N.D.		1.1	1
00774	Phenanthrene	85-01-8	0.049	J	0.042	1
00774	Pyrene	129-00-0	0.14	J	0.11	1

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
SW-846 8021B	**GC Volatiles**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	N.D.		0.2	1
08213	Ethylbenzene	100-41-4	0.2	J	0.2	1
08213	Toluene	108-88-3	N.D.		0.2	1
08213	Total Xylenes	1330-20-7	N.D.		0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/03/2009 13:44	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09086WAA026	03/27/2009 16:40	JoElla L Rice	1
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 20:23	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 20:23	Carrie E Youtzy	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5632281

Group No. 1137750
WI

MA1-MW38S-032509-04 Groundwater
0128730, 204110 02687.007.007.0001
Moss American

Collected: 03/25/2009 14:48

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
P.O. Box 268859
Oklahoma City OK 73126-8859

MO38S SDG#: KMA97-04

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
SW-846 8310	**GC/MS Semivolatiles**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	1.8	J	0.54	1
00774	Acenaphthylene	208-96-8	N.D.		6.0	1
00774	Anthracene	120-12-7	N.D.		0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.		0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.		0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.		0.0086	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.		0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.		0.0086	1
00774	Chrysene	218-01-9	N.D.		0.043	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.		0.021	1
00774	Fluoranthene	206-44-0	N.D.		0.021	1
00774	Fluorene	86-73-7	N.D.		0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.043	1
00774	Naphthalene	91-20-3	94		1.1	1
00774	Phenanthrene	85-01-8	N.D.		0.043	1
00774	Pyrene	129-00-0	N.D.		0.11	1

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

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
SW-846 8021B	**GC Volatiles**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	1.8		0.2	1
08213	Ethylbenzene	100-41-4	2.0		0.2	1
08213	Toluene	108-88-3	N.D.		0.2	1
08213	Total Xylenes	1330-20-7	1	J	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/03/2009 14:23	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09086WAA026	03/27/2009 16:40	JoElla L Rice	1
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 20:50	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 20:50	Carrie E Youtzy	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5632282

Group No. 1137750
WI

MA1-TB-032509-05 Groundwater
0128730 02687.007.007.0001
Moss American

Collected: 03/25/2009

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
P.O. Box 268859
Oklahoma City OK 73126-8859

MOSTB SDG#: KMA97-05TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8021B	**GC Volatiles**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 19:56	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 19:56	Carrie E Youtzy	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5632283

Group No. 1137750
WI

MA1-MW38S-032509-04-DUP Groundwater
0128730, 204110 02687.007.007.0001
Moss American

Collected: 03/25/2009 14:48

Account Number: 11947

Submitted: 03/26/2009 09:50
Reported: 04/07/2009 at 11:57
Discard: 06/07/2009

Tronox LLC
P.O. Box 268859
Oklahoma City OK 73126-8859

MOSFD SDG#: KMA97-06FD*

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
SW-846 8310	**GC/MS Semivolatiles**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	2.7		0.54	1
00774	Acenaphthylene	208-96-8	N.D.		6.0	1
00774	Anthracene	120-12-7	N.D.		0.022	1
00774	Benzo(a)anthracene	56-55-3	N.D.		0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.		0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.		0.0087	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.		0.065	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.		0.0087	1
00774	Chrysene	218-01-9	N.D.		0.044	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.		0.022	1
00774	Fluoranthene	206-44-0	N.D.		0.022	1
00774	Fluorene	86-73-7	N.D.		0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.044	1
00774	Naphthalene	91-20-3	140		1.1	1
00774	Phenanthrene	85-01-8	N.D.		0.044	1
00774	Pyrene	129-00-0	N.D.		0.11	1

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

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
SW-846 8021B	**GC Volatiles**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	1.9		0.2	1
08213	Ethylbenzene	100-41-4	2.2		0.2	1
08213	Toluene	108-88-3	N.D.		0.2	1
08213	Total Xylenes	1330-20-7	1.0	J	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09086WAA026	04/03/2009 15:02	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09086WAA026	03/27/2009 16:40	JoElla L Rice	1
08213	BTEX (8021)	SW-846 8021B	1	09086A94A	03/27/2009 21:17	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	1	09086A94A	03/27/2009 21:17	Carrie E Youtzy	1

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Tronox LLC Group Number: 1137750
Reported: 04/07/09 at 11:57 AM

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: 09086WAA026	Sample number(s): 5632276-5632281,5632283							
Acenaphthene	N.D.	0.50	ug/l	96		61-102		
Acenaphthylene	N.D.	1.0	ug/l	94		61-99		
Anthracene	N.D.	0.020	ug/l	94		69-103		
Benzo(a)anthracene	N.D.	0.010	ug/l	95		74-109		
Benzo(a)pyrene	N.D.	0.010	ug/l	97		67-107		
Benzo(b)fluoranthene	N.D.	0.0080	ug/l	97		76-110		
Benzo(g,h,i)perylene	N.D.	0.060	ug/l	99		62-117		
Benzo(k)fluoranthene	N.D.	0.0080	ug/l	99		77-109		
Chrysene	N.D.	0.040	ug/l	96		74-111		
Dibenz(a,h)anthracene	N.D.	0.020	ug/l	96		75-109		
Fluoranthene	N.D.	0.020	ug/l	98		68-103		
Fluorene	N.D.	0.10	ug/l	102		67-107		
Indeno(1,2,3-cd)pyrene	N.D.	0.040	ug/l	104		72-109		
Naphthalene	N.D.	1.0	ug/l	91		57-95		
Phenanthrene	N.D.	0.040	ug/l	103		71-108		
Pyrene	N.D.	0.10	ug/l	99		70-108		
Batch number: 09086A94A	Sample number(s): 5632276-5632283							
Benzene	N.D.	0.2	ug/l	105	105	80-120	0	30
Ethylbenzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Toluene	N.D.	0.2	ug/l	110	105	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	110	107	80-120	3	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 09086WAA026	Sample number(s): 5632276-5632281,5632283 UNSPK: 5632276								
Acenaphthene	95	94	67-99	1	30				
Acenaphthylene	96	94	54-117	1	30				
Anthracene	93	93	74-101	0	30				
Benzo(a)anthracene	90	90	78-106	0	30				
Benzo(a)pyrene	93	92	77-102	1	30				
Benzo(b)fluoranthene	91	91	79-108	0	30				
Benzo(g,h,i)perylene	92	91	68-116	1	30				
Benzo(k)fluoranthene	94	92	81-105	1	30				
Chrysene	91	91	78-108	0	30				
Dibenz(a,h)anthracene	90	90	75-104	1	30				
Fluoranthene	94	93	75-96	1	30				

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1137750
Reported: 04/07/09 at 11:57 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Fluorene	100	100	73-103	0	30				
Indeno(1,2,3-cd)pyrene	99	99	78-106	0	30				
Naphthalene	90	87	61-94	3	30				
Phenanthrene	100	100	66-115	0	30				
Pyrene	96	96	73-105	0	30				
Batch number: 09086A94A	Sample number(s): 5632276-5632283 UNSPK: 5632276								
Benzene	105	105	70-152	0	30				
Ethylbenzene	114	114	75-133	0	30				
Toluene	115	115	78-129	0	30				
Total Xylenes	115	117	67-155	1	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX (8021)
Batch number: 09086A94A

	Trifluorotoluene-P
5632276	97
5632277	97
5632278	97
5632279	96
5632280	98
5632281	96
5632282	97
5632283	97
Blank	98
LCS	97
LCSD	97
MS	97
MSD	97
Limits:	69-129

Analysis Name: PAH's in Water by HPLC
Batch number: 09086WAA026

	Nitrobenzene	Triphenylene
5632276	91	106
5632277	96	107
5632278	93	106
5632279	96	4954*
5632280	92	102
5632281	68	74
5632283	99	110
Blank	93	104
LCS	96	109

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1137750
Reported: 04/07/09 at 11:57 AM

Surrogate Quality Control

MS	96	107
MSD	93	106
Limits:	67-111	59-127

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

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 11947 Group# 1137750 Sample # 563227G-83

COC # 0128730

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

(1) Client: WESTON SOLUTIONS INC. Acct. #:

Project Name/#: MOSS AMERICAN 11947 PWSID #:

Project Manager: TOM GRAAN P.O.#:

Sampler: Quote #:

Name of state where samples were collected: WI

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix (4) Soil	Water	Other	Total # of Containers	(5) Analyses Requested: Preservation Codes H: BTEX	PAH	Remarks	(6) Hazardous or Special Handling if any
MA1-MW7S-032509-01	3/25/09	1204	X			X		15	X		MS/MSD	
MA1-MW8S-032509-02	3/25/09	1314	X			X		5	X	X		
MA1-MW9S-032509-03	3/25/09	1333	X			X		5	X	X		
MA1-MW3S-032509-04	3/25/09	1448	X			X		3	X			
MA1-TB-032509-05	3/25/09	—	X			X		2	X			

Matrix: Check if Applicable ☐ NPDES

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 O=Other

(7) **Turnaround Time Requested** (TAT) (please circle): (Normal) Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

Rush results requested by (please circle): Phone Fax E-mail

Phone #: Fax #:

E-mail address:

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

Type I (validation/NJ Reg)

Type II (Tier II)

Type III (Reduced NJ)

Type IV (CLP SOW)

Type VI (Raw Data Only)

TX TRRP-13

MA MCP CT RCP

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate volume.)

Internal COC Required? Yes / No

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	3/25/09	1545			
			[signature]	3-26-09	0950

(9)

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766

Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

2102.03

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 11947 Group# 1137750 Sample # 5632276-83

COC # 204110

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

(1)
Client: WESTON SOLUTIONS INC Acct. #:
Project Name/#: MISS AMERICAN 1947 PWSID #:
Project Manager: TOM GRAAN P.O.#:
Sampler: Quote #:
Name of state where samples were collected:

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	(3) Composite	(4) Matrix: Soil	(4) Matrix: Water (☐ Potable ☐ NPDES)	(4) Matrix: Other	(4) Total # of Containers	(5) Analyses Requested: PAHs	(6) Number of samples per container
MAI-MW7S-032509-01	3/25/09	1204	X			X		6	X	
MAI MW38S-032509-04 Dup	3/25/09	1448	X			X		4	X	

(5) Analyses Requested — Preservation Codes

For Lab Use Only
FSC:
SCR#: 73610

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Remarks

(6) Temperature of samples upon receipt (if requested)

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

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No
SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	3-19-09	1030	[signature]	3/19/09	16:00
[signature]	3/25/09	1915			
			[signature]	3-26-09	0950

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Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

2102.03

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Weston Solutions

Date of Receipt: 3-26-09

Time of Receipt: 0950

Source Code: 50-1

Unpacker Emp. No.: 2132

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	0177	3.0°	TB	WI	Y	B	
2	↓	2.0°	↓	↓	↓	↓	
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Rcvd 3 extra vials of MAI-MW38S-032509-04

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[signature]	3-26-09	1328	Unpacking / Storage
Mary Beth Reed	3/26/09	1357	Place in Storage or (Entry)
			Entry
			Entry

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

405-775-5429

Prepared by:

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

September 29, 2009

SAMPLE GROUP

The sample group for this submittal is 1162266. Samples arrived at the laboratory on Thursday, September 17, 2009. The PO# for this group is ZAKW1KEOK0A90089.

Client Description	Lancaster Labs Number
MA3-FB-091609-10 Groundwater	5778995
MA3-MW27S-091609-3 Groundwater	5778996
MA3-MW31S-091609-6 Groundwater	5778997
MA3-MW32S-091609-1 Groundwater	5778998
MA3-MW32S-091609-1-DP Groundwater	5778999
MA3-MW38S-091509-2 Groundwater	5779000
MA3-MW5S-091609-9 Groundwater	5779001
MA3-MWF-091609-8 Groundwater	5779002
MA3-MWF-091609-8-DP Groundwater	5779003
MA3-MWG-091609-7 Groundwater	5779004
MA3-MWH-091609-5 Groundwater	5779005
MA3-MWI-091609-4 Groundwater	5779006
MA3-MWJ-091609-2 Groundwater	5779007
MA3-MWJ-091609-2MS Groundwater	5779008
MA3-MWJ-091609-2MSD Groundwater	5779009
MA3-MWK-091509-1 Groundwater	5779010
MA3-TB-091509-3 Groundwater	5779011

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

ELECTRONIC COPY TO	Tronox LLC	Attn: Keith Watson
ELECTRONIC COPY TO	Weston Solutions, Inc.	Attn: Tom Graan
ELECTRONIC COPY TO	Tronox LLC	Attn: Sherron Hendricks
ELECTRONIC COPY TO	Tronox LLC	Attn: Roy Widmann
ELECTRONIC COPY TO	Weston Solutions	Attn: Andris Slesers
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300

Respectfully Submitted,

Martha L. Seidel
Senior Chemist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5778995

Group No. 1162266
WI

MA3-FB-091609-10 Groundwater
091601-2,4 02687.007.007.0001
Moss American

Collected: 09/16/2009 18:25

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA310 SDG#: KMA98-01FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.54	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.022	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0087	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.065	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0087	1
00774	Chrysene	218-01-9	N.D.	0.065	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.022	1
00774	Fluoranthene	206-44-0	N.D.	0.022	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.043	1
00774	Pyrene	129-00-0	N.D.	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.2	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 13:56	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 15:52	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 15:52	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5778996

Group No. 1162266
WI

MA3-MW27S-091609-3 Groundwater
091601-2,3 02687.007.007.0001
Moss American

Collected: 09/16/2009 11:05

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-3 SDG#: KMA98-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.064	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.043	1
00774	Pyrene	129-00-0	N.D.	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 14:34	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 16:18	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 16:18	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5778997

Group No. 1162266
WI

MA3-MW31S-091609-6 Groundwater
091601-2,3 02687.007.007.0001
Moss American

Collected: 09/16/2009 13:10

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-6 SDG#: KMA98-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	0.026 J	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0084	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0084	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.11	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 15:13	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 16:45	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 16:45	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5778998

Group No. 1162266
WI

MA3-MW32S-091609-1 Groundwater
091601-2,3 02687.007.007.0001
Moss American

Collected: 09/16/2009 09:15

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-1 SDG#: KMA98-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0084	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0084	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 15:52	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 17:11	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 17:11	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5778999

Group No. 1162266
WI

MA3-MW32S-091609-1-DP Groundwater
091601-2,3 02687.007.007.0001
Moss American

Collected: 09/16/2009 09:15

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA31D SDG#: KMA98-05FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.11	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 17:10	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 17:37	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 17:37	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779000

Group No. 1162266
WI

MA3-MW38S-091509-2 Groundwater
091601-2 02687.007.007.0001
Moss American

Collected: 09/15/2009 19:25

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-2 SDG#: KMA98-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	3.4	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	4.6	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0084	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0084	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	82	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.10	1

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	1.9	0.2	1
08213	Ethylbenzene	100-41-4	1.4	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	0.8 J	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09265WAE026	09/24/2009 04:44	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	2	09265WAE026	09/22/2009 17:00	Timothy J Attenberger	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 18:04	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 18:04	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779001

Group No. 1162266
WI

MA3-MW5S-091609-9 Groundwater
091601-2,4 02687.007.007.0001
Moss American

Collected: 09/16/2009 17:09

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

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PO Box 268859
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MA3-9 SDG#: KMA98-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0083	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 18:28	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 18:30	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 18:30	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779002

Group No. 1162266
WI

MA3-MWF-091609-8 Groundwater
091601-2,4 02687.007.007.0001
Moss American

Collected: 09/16/2009 17:43

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-8 SDG#: KMA98-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0086	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0086	1
00774	Chrysene	218-01-9	N.D.	0.064	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.043	1
00774	Pyrene	129-00-0	N.D.	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.6	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 19:06	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 18:57	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 18:57	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779003

Group No. 1162266
WI

MA3-MWF-091609-8-DP Groundwater
091601-2,4 02687.007.007.0001
Moss American

Collected: 09/16/2009 17:43

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA38D SDG#: KMA98-09FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.064	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.043	1
00774	Pyrene	129-00-0	N.D.	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.5	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 19:45	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 19:23	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 19:23	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779004

Group No. 1162266
WI

MA3-MWG-091609-7 Groundwater
091601-2,3 02687.007.007.0001
Moss American

Collected: 09/16/2009 15:35

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-7 SDG#: KMA98-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.064	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.043	1
00774	Pyrene	129-00-0	N.D.	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.1	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 20:24	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 19:50	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 19:50	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779005

Group No. 1162266
WI

MA3-MWH-091609-5 Groundwater
091601-1,2 02687.007.007.0001
Moss American

Collected: 09/16/2009 12:23

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-5 SDG#: KMA98-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.11	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 21:03	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 20:42	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 20:42	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779006

Group No. 1162266
WI

MA3-MWI-091609-4 Groundwater
091601-1,2 02687.007.007.0001
Moss American

Collected: 09/16/2009 10:58

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-4 SDG#: KMA98-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	0.015 J	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	0.027 J	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.11	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 21:42	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09264B94A	09/22/2009 21:09	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09264B94A	09/22/2009 21:09	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779007

Group No. 1162266
WI

MA3-MWJ-091609-2 Groundwater
091601-1,2 02687.007.007.0001
Moss American

Collected: 09/16/2009 09:31

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA32- SDG#: KMA98-13BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.56	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.022	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0089	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.067	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0089	1
00774	Chrysene	218-01-9	N.D.	0.067	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.022	1
00774	Fluoranthene	206-44-0	N.D.	0.022	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.044	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.044	1
00774	Pyrene	129-00-0	N.D.	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.2	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 11:59	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 03:43	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 03:43	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779008

Group No. 1162266
WI

MA3-MWJ-091609-2MS Groundwater
091601-1,2 02687.007.007.0001
Moss American

Collected: 09/16/2009 09:31

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA32- SDG#: KMA98-13MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	87	0.56	1
00774	Acenaphthylene	208-96-8	170	1.1	1
00774	Anthracene	120-12-7	2.9	0.022	1
00774	Benzo(a)anthracene	56-55-3	1.5	0.011	1
00774	Benzo(a)pyrene	50-32-8	1.6	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	1.3	0.0089	1
00774	Benzo(g,h,i)perylene	191-24-2	13	0.067	1
00774	Benzo(k)fluoranthene	207-08-9	1.3	0.0089	1
00774	Chrysene	218-01-9	6.3	0.067	1
00774	Dibenz(a,h)anthracene	53-70-3	3.2	0.022	1
00774	Fluoranthene	206-44-0	2.9	0.022	1
00774	Fluorene	86-73-7	20	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	7.2	0.044	1
00774	Naphthalene	91-20-3	160	1.1	1
00774	Phenanthrene	85-01-8	6.1	0.044	1
00774	Pyrene	129-00-0	21	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	23	0.2	1
08213	Ethylbenzene	100-41-4	23	0.2	1
08213	Toluene	108-88-3	25	0.2	1
08213	Total Xylenes	1330-20-7	71	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 12:38	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 04:09	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 04:09	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779009

Group No. 1162266
WI

MA3-MWJ-091609-2MSD Groundwater
091601-1,2 02687.007.007.0001
Moss American

Collected: 09/16/2009 09:31

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

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PO Box 268859
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MA32- SDG#: KMA98-13MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	95	0.56	1
00774	Acenaphthylene	208-96-8	190	1.1	1
00774	Anthracene	120-12-7	3.1	0.022	1
00774	Benzo(a)anthracene	56-55-3	1.6	0.011	1
00774	Benzo(a)pyrene	50-32-8	1.7	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	1.3	0.0089	1
00774	Benzo(g,h,i)perylene	191-24-2	14	0.067	1
00774	Benzo(k)fluoranthene	207-08-9	1.4	0.0089	1
00774	Chrysene	218-01-9	6.5	0.067	1
00774	Dibenz(a,h)anthracene	53-70-3	3.4	0.022	1
00774	Fluoranthene	206-44-0	3.1	0.022	1
00774	Fluorene	86-73-7	21	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	7.5	0.044	1
00774	Naphthalene	91-20-3	180	1.1	1
00774	Phenanthrene	85-01-8	6.6	0.044	1
00774	Pyrene	129-00-0	22	0.11	1

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

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	23	0.2	1
08213	Ethylbenzene	100-41-4	23	0.2	1
08213	Toluene	108-88-3	24	0.2	1
08213	Total Xylenes	1330-20-7	69	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 13:17	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 04:36	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 04:36	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779010

Group No. 1162266
WI

MA3-MWK-091509-1 Groundwater
091601-2,4 02687.007.007.0001
Moss American

Collected: 09/15/2009 17:03

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA31- SDG#: KMA98-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.54	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.022	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	0.017 J	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	0.028 J	0.0087	1
00774	Benzo(g,h,i)perylene	191-24-2	0.069 J	0.065	1
00774	Benzo(k)fluoranthene	207-08-9	0.011 J	0.0087	1
00774	Chrysene	218-01-9	N.D.	0.065	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.022	1
00774	Fluoranthene	206-44-0	0.044 J	0.022	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	0.052 J	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	0.045 J	0.043	1
00774	Pyrene	129-00-0	N.D.	0.11	1

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

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	0.3 J	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09260WAM026	09/19/2009 22:20	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09260WAM026	09/18/2009 09:00	Denise L Trimby	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 21:33	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 21:33	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5779011

Group No. 1162266
WI

MA3-TB-091509-3 Groundwater
091601-2 02687.007.007.0001
Moss American

Collected: 09/15/2009 19:25

Account Number: 11947

Submitted: 09/17/2009 09:15
Reported: 09/29/2009 at 13:44
Discard: 11/29/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3-T SDG#: KMA98-15TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 19:47	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 19:47	Marie D John	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162266
Reported: 09/29/09 at 01:44 PM

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: 09260WAM026	Sample number(s): 5778995-5778999,5779001-5779010							
Acenaphthene	N.D.	0.50	ug/l	87	80	61-102	7	30
Acenaphthylene	N.D.	1.0	ug/l	84	78	61-99	6	30
Anthracene	N.D.	0.020	ug/l	90	87	69-103	4	30
Benzo(a)anthracene	N.D.	0.010	ug/l	94	91	74-109	3	30
Benzo(a)pyrene	N.D.	0.010	ug/l	103	95	67-107	8	30
Benzo(b)fluoranthene	N.D.	0.0080	ug/l	97	95	76-110	3	30
Benzo(g,h,i)perylene	N.D.	0.060	ug/l	100	99	62-117	1	30
Benzo(k)fluoranthene	N.D.	0.0080	ug/l	98	97	77-109	2	30
Chrysene	N.D.	0.060	ug/l	95	92	74-111	3	30
Dibenz(a,h)anthracene	N.D.	0.020	ug/l	96	96	75-109	1	30
Fluoranthene	N.D.	0.020	ug/l	91	87	68-103	5	30
Fluorene	N.D.	0.10	ug/l	94	89	67-107	6	30
Indeno(1,2,3-cd)pyrene	N.D.	0.040	ug/l	108	106	81-122	2	30
Naphthalene	N.D.	1.0	ug/l	79	74	57-95	7	30
Phenanthrene	N.D.	0.040	ug/l	96	92	71-108	5	30
Pyrene	N.D.	0.10	ug/l	96	92	70-108	4	30
Batch number: 09265WAE026	Sample number(s): 5779000							
Acenaphthene	N.D.	0.50	ug/l	91	84	61-102	8	30
Acenaphthylene	N.D.	1.0	ug/l	87	82	61-99	6	30
Anthracene	N.D.	0.020	ug/l	91	87	69-103	4	30
Benzo(a)anthracene	N.D.	0.010	ug/l	95	92	74-109	4	30
Benzo(a)pyrene	N.D.	0.010	ug/l	97	94	67-107	3	30
Benzo(b)fluoranthene	N.D.	0.0080	ug/l	98	95	76-110	3	30
Benzo(g,h,i)perylene	N.D.	0.060	ug/l	99	99	62-117	0	30
Benzo(k)fluoranthene	N.D.	0.0080	ug/l	100	98	77-109	2	30
Chrysene	N.D.	0.060	ug/l	98	95	74-111	3	30
Dibenz(a,h)anthracene	N.D.	0.020	ug/l	97	96	75-109	0	30
Fluoranthene	N.D.	0.020	ug/l	94	89	68-103	6	30
Fluorene	N.D.	0.10	ug/l	98	92	67-107	6	30
Indeno(1,2,3-cd)pyrene	N.D.	0.040	ug/l	106	106	81-122	0	30
Naphthalene	N.D.	1.0	ug/l	83	78	57-95	7	30
Phenanthrene	N.D.	0.040	ug/l	101	95	71-108	6	30
Pyrene	N.D.	0.10	ug/l	100	96	70-108	4	30
Batch number: 09264B94A	Sample number(s): 5778995-5779006							
Benzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Ethylbenzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Toluene	N.D.	0.2	ug/l	110	105	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	110	107	80-120	3	30
Batch number: 09265A94A	Sample number(s): 5779007-5779011							
Benzene	N.D.	0.2	ug/l	95	100	80-120	5	30
Ethylbenzene	N.D.	0.2	ug/l	95	100	80-120	5	30
Toluene	N.D.	0.2	ug/l	95	100	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	98	103	80-120	5	30

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162266
Reported: 09/29/09 at 01:44 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 09260WAM026	Sample number(s): 5778995-5778999,5779001-5779010 UNSPK: 5779007								
Acenaphthene	78	86	67-99	9	30				
Acenaphthylene	76	84	66-97	10	30				
Anthracene	88	93	74-101	6	30				
Benzo(a)anthracene	93	98	78-106	5	30				
Benzo(a)pyrene	98	101	77-102	4	30				
Benzo(b)fluoranthene	97	101	79-108	4	30				
Benzo(g,h,i)perylene	101	103	68-116	3	30				
Benzo(k)fluoranthene	99	103	81-105	4	30				
Chrysene	94	98	78-108	4	30				
Dibenz(a,h)anthracene	97	101	75-104	4	30				
Fluoranthene	87	93	75-96	7	30				
Fluorene	88	96	73-103	8	30				
Indeno(1,2,3-cd)pyrene	108*	112*	78-106	4	30				
Naphthalene	71	79	61-94	11	30				
Phenanthrene	92	99	66-115	7	30				
Pyrene	93	99	73-105	6	30				
Batch number: 09264B94A	Sample number(s): 5778995-5779006 UNSPK: 5778995								
Benzene	110		70-152						
Ethylbenzene	110		75-133						
Toluene	104		78-129						
Total Xylenes	112		67-155						
Batch number: 09265A94A	Sample number(s): 5779007-5779011 UNSPK: 5779007								
Benzene	115	115	70-152	0	30				
Ethylbenzene	115	115	75-133	0	30				
Toluene	119	114	78-129	4	30				
Total Xylenes	118	115	67-155	3	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PAH's in Water by HPLC
Batch number: 09260WAM026

	Nitrobenzene	Triphenylene
5778995	112*	116
5778996	99	102

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162266
Reported: 09/29/09 at 01:44 PM

Surrogate Quality Control

5778997	93	103
5778998	97	102
5778999	102	108
5779001	109	112
5779002	97	104
5779003	107	111
5779004	107	111
5779005	106	111
5779006	102	107
5779007	100	104
5779008	105	108
5779009	113*	113
5779010	102	104
Blank	96	107
LCS	112*	111
LCSD	106	105
MS	105	108
MSD	113*	113
Limits:	67-111	77-122

Analysis Name: PAH's in Water by HPLC
Batch number: 09265WAE026

	Nitrobenzene	Triphenylene
5779000	97	100
Blank	103	104
LCS	107	110
LCSD	105	104
Limits:	67-111	77-122

Analysis Name: BTEX (8021)
Batch number: 09264B94A

	Trifluorotoluene-P
5778995	97
5778996	97
5778997	96
5778998	96
5778999	97
5779000	96
5779001	96
5779002	96
5779003	97
5779004	96
5779005	96
5779006	96
Blank	96
LCS	96
LCSD	96
MS	95
Limits:	69-129

Analysis Name: BTEX (8021)
Batch number: 09265A94A

	Trifluorotoluene-P

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162266
Reported: 09/29/09 at 01:44 PM

Surrogate Quality Control

5779007	96
5779010	96
5779011	96
Blank	96
LCS	96
LCSD	96
MS	95
MSD	96
Limits:	69-129

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

Account# 11947 Group# 1162266 Sample# 5778995-11

COC ID: 091601-2

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.007.0001 | 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	8021B-BTEX	8021B-BTEX	8310-PAHS						
					Filtered									
					Container	40ml-Glass Via	40ml-Glass Via	1L Amber G						
					Preservative	HCl	N/A	N/A						
	MA3-FB-091609-10	W		N	9/16/2009 18:25	3								
	MA3-MW27S-091609-3	W		N	9/16/2009 11:05	3								
	MA3-MW31S-091609-6	W		N	9/16/2009 13:10	3								
	MA3-MW32S-091609-1	W		N	9/16/2009 09:15	3								
	MA3-MW32S-091609-1-DP	W		N	9/16/2009 09:15	3								
	MA3-MW38S-091509-2	W		N	9/15/2009 19:25	3		2						
	MA3-MW5S-091609-9	W		N	9/16/2009 17:09	3								
	MA3-MWF-091609-8	W		N	9/16/2009 17:43	3								
	MA3-MWF-091609-8-DP	W		N	9/16/2009 17:43	3								
	MA3-MWG-091609-7	W		N	9/16/2009 15:35	3								
	MA3-MWH-091609-5	W		N	9/16/2009 12:23	3								
	MA3-MWI-091609-4	W		N	9/16/2009 10:58	3								
	MA3-MWJ-091609-2	W		Y	9/16/2009 09:31	9								
	MA3-MWK-091509-1	W		N	9/15/2009 17:03	3								
	MA3-TB-091509-3	W		N	9/15/2009 19:25		2							

Remarks/Comments

Sampled By

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]	1945 09/16/09					[signature]	9/17/09 915

Account# 11947 Group# 1162266 Sample# 5778995-11

COC ID: 091601-3

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.007.0001 | 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	8310-PAHS
					Filtered	
					Container	0mL Amber G
					Preservative	N/A
	MA3-MW27S-091609-3	W		N	9/16/2009 11:05	2
	MA3-MW31S-091609-6	W		N	9/16/2009 13:10	2
	MA3-MW32S-091609-1	W		N	9/16/2009 09:15	2
	MA3-MW32S-091609-1-DP	W		N	9/16/2009 09:15	2
	MA3-MWG-091609-7	W		N	9/16/2009 15:35	2

Remarks/Comments

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]	1945 9/16/09						9/17/09 915

Account# 11947 Group# 1162266 Sample# 5-778995-11

COC ID: 091609-1

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	8310-PAHS
						Filtered
						Container
						Preservative
	MA3-MWH-091609-5	W		N	9/16/2009 12:23	2
	MA3-MWI-091609-4	W		N	9/16/2009 10:58	2
	MA3-MWJ-091609-2	W		Y	9/16/2009 09:31	6

Container: 40mL Amber G
Preservative: N/A

Remarks/Comments

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
Undo	1945 9/16/09						
							9/17/09 915

Sampled By: Dave Valdo

Account# 11947 Group# 1162266 Sample# 5778995-11

COC ID: 091609-4

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	8310-PAHS								
						Filtered								
						Container	60mL Amber G							
						Preservative	N/A							
	MA3-FB-091609-10	W		N	9/16/2009 18:25	2								
	MA3-MW5S-091609-9	W		N	9/16/2009 17:09	2								
	MA3-MWF-091609-8	W		N	9/16/2009 17:43	2								
	MA3-MWF-091609-8-DP	W		N	9/16/2009 17:43	2								
	MA3-MWK-091509-1	W		N	9/15/2009 17:03	2								

Remarks/Comments

Sampled By

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]	1945 9/16/09						
						Mary Dodel	9/17/09 915

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Kerr McGee

Date of Receipt: 9/17/09

Time of Receipt: 915

Source Code: 50-1

Unpacker Emp. No.: 2316

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	01299T5	4.5°C	TB	WI	Y	B	
2	↓	2.5°C	↓	↓	↓	↓	
3		3.1°C					
4	↓	4.0°C	↓	↓	↓	↓	
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Gary Gordach	9/17/09	1140	Unpacking 1570198
Mary Beth Reed	9/17/09	1316	Place in Storage or (Entry)
			Entry
			Entry

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

405-775-5429

Prepared by:

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

September 26, 2009

SAMPLE GROUP

The sample group for this submittal is 1162417. Samples arrived at the laboratory on Friday, September 18, 2009. The PO# for this group is ZAKW1KEOK0A90089.

Client Description	Lancaster Labs Number
MA3-FB-091709-16 Groundwater	5780039
MA3-MW34S-091709-14 Groundwater	5780040
MA3-MW7S-091709-13 Groundwater	5780041
MA3-MW7S-091709-13-DP Groundwater	5780042
MA3-TB-091709-2 Groundwater	5780043
MA3-TG1-1-091709-8 Groundwater	5780044
MA3-TG1-3-091709-9 Groundwater	5780045
MA3-TG2-1-091709-15 Groundwater	5780046
MA3-TG2-3-091709-12 Groundwater	5780047
MA3-TG3-1-091709-10 Groundwater	5780048
MA3-TG3-3-091709-11 Groundwater	5780049
MA3-TG4-1-091709-6 Groundwater	5780050
MA3-TG4-3-091709-7 Groundwater	5780051
MA3-TG5-1-091709-3 Groundwater	5780052
MA3-TG5-3-091709-4 Groundwater	5780053
MA3-TG6-1-091709-5 Groundwater	5780054
MA3-TG6-3-091709-1 Groundwater	5780055

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ELECTRONIC COPY TO	Tronox LLC	Attn: Keith Watson
ELECTRONIC COPY TO	Weston Solutions, Inc.	Attn: Tom Graan
ELECTRONIC COPY TO	Tronox LLC	Attn: Sherron Hendricks
ELECTRONIC COPY TO	Tronox LLC	Attn: Roy Widmann
ELECTRONIC COPY TO	Weston Solutions	Attn: Andris Slesers
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300

Respectfully Submitted,

Chad A. Moline
Group Leader

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Lancaster Laboratories Sample No. WW 5780039

Group No. 1162417
WI

MA3-FB-091709-16 Groundwater
091709-7,8 02687.007.007.0001
Moss American

Collected: 09/17/2009 17:30

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3F- SDG#: KMA99-01FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0082	1
00774	Chrysene	218-01-9	N.D.	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	N.D.	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 12:19	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 20:13	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 20:13	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780040

Group No. 1162417
WI

MA3-MW34S-091709-14 Groundwater
091709-7,8 02687.007.007.0001
Moss American

Collected: 09/17/2009 15:58

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA334 SDG#: KMA99-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	3,800	10	20
00774	Acenaphthylene	208-96-8	310	21	20
00774	Anthracene	120-12-7	1,100	8.3	400
00774	Benzo(a)anthracene	56-55-3	660	4.1	400
00774	Benzo(a)pyrene	50-32-8	240	4.1	400
00774	Benzo(b)fluoranthene	205-99-2	240	3.3	400
00774	Benzo(g,h,i)perylene	191-24-2	140	1.2	20
00774	Benzo(k)fluoranthene	207-08-9	130	3.3	400
00774	Chrysene	218-01-9	580	25	400
00774	Dibenz(a,h)anthracene	53-70-3	25	0.41	20
00774	Fluoranthene	206-44-0	4,000	21	1000
00774	Fluorene	86-73-7	3,600	41	400
00774	Indeno(1,2,3-cd)pyrene	193-39-5	100	0.83	20
00774	Naphthalene	91-20-3	18,000	410	400
00774	Phenanthrene	85-01-8	9,700	41	1000
00774	Pyrene	129-00-0	3,300	41	400

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

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.

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	7.4	0.2	1
08213	Ethylbenzene	100-41-4	29	0.2	1
08213	Toluene	108-88-3	1.2	0.2	1
08213	Total Xylenes	1330-20-7	58	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 22:47	Mark A Clark	20
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/24/2009 23:37	Mark A Clark	400
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/25/2009 01:54	Mark A Clark	1000
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 21:59	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 21:59	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780041

Group No. 1162417
WI

MA3-MW7S-091709-13 Groundwater
091709-7,8 02687.007.007.0001
Moss American

Collected: 09/17/2009 15:52

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA37S SDG#: KMA99-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	5.3	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	3.9	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0082	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	0.99	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	4.2	1.0	1
00774	Phenanthrene	85-01-8	0.075 J	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	0.8 J	0.2	1
08213	Ethylbenzene	100-41-4	0.9 J	0.2	1
08213	Toluene	108-88-3	1.4	0.2	1
08213	Total Xylenes	1330-20-7	1.3 J	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 12:58	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 22:25	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 22:25	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780042

Group No. 1162417
WI

MA3-MW7S-091709-13-DP Groundwater
091709-7,8 02687.007.007.0001
Moss American

Collected: 09/17/2009 15:52

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA7SD SDG#: KMA99-04FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	5.1	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	3.5	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0082	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	0.96	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	3.8	1.0	1
00774	Phenanthrene	85-01-8	0.065 J	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	0.8 J	0.2	1
08213	Ethylbenzene	100-41-4	1.3	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	1.5 J	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 13:37	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 22:52	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 22:52	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780043

Group No. 1162417
WI

MA3-TB-091709-2 Groundwater
091709-7 02687.007.007.0001
Moss American

Collected: 09/17/2009 09:05

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MA3T- SDG#: KMA99-05TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 20:40	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 20:40	Marie D John	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780044 **Group No. 1162417**
WI

MA3-TG1-1-091709-8 Groundwater
091709-7,5 02687.007.007.0001
Moss American

Collected: 09/17/2009 12:02 Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG11 SDG#: KMA99-06

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	7,700		210	400
00774	Acenaphthylene	208-96-8	430		21	20
00774	Anthracene	120-12-7	1,800		8.3	400
00774	Benzo(a)anthracene	56-55-3	1,200		4.1	400
00774	Benzo(a)pyrene	50-32-8	450		4.1	400
00774	Benzo(b)fluoranthene	205-99-2	440		3.3	400
00774	Benzo(g,h,i)perylene	191-24-2	280		1.2	20
00774	Benzo(k)fluoranthene	207-08-9	240		3.3	400
00774	Chrysene	218-01-9	950		25	400
00774	Dibenz(a,h)anthracene	53-70-3	45		0.41	20
00774	Fluoranthene	206-44-0	6,700		41	2000
00774	Fluorene	86-73-7	6,400		41	400
00774	Indeno(1,2,3-cd)pyrene	193-39-5	200		0.83	20
00774	Naphthalene	91-20-3	13,000		410	400
00774	Phenanthrene	85-01-8	15,000		83	2000
00774	Pyrene	129-00-0	5,300		41	400

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

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.

GC Volatiles	**SW-846 8021B**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	0.2	J	0.2	1
08213	Ethylbenzene	100-41-4	27		0.2	1
08213	Toluene	108-88-3	1.3		0.2	1
08213	Total Xylenes	1330-20-7	49		0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**		**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	1.4		0.50	1
	EPA 353.2		**mg/l**		**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.		4.0	100
	The reporting limit(s) for the analyte(s) above was raised due to matrix interference.					
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1
	EPA 365.1		**mg/l**		**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	13.0		1.2	5
	EPA 415.1		**mg/l**		**mg/l**	
00273	Total Organic Carbon	n.a.	11.1		0.50	1
	EPA 350.2		**mg/l**		**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	N.D.		0.20	1

Lancaster Laboratories Sample No. WW 5780044

Group No. 1162417
WI

MA3-TG1-1-091709-8 Groundwater
091709-7,5 02687.007.007.0001
Moss American

Collected: 09/17/2009 12:02

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG11 SDG#: KMA99-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 365.3**		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	15.5	0.80	1
	EPA 410.2		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	294	13.0	5

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/24/2009 00:12	Mark A Clark	20
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/25/2009 00:23	Mark A Clark	400
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/25/2009 03:19	Mark A Clark	2000
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 23:18	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 23:18	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:35	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:14	K. Robert Caulfeild-James	100
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102A	09/18/2009 16:21	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101A	09/24/2009 20:00	Joseph E McKenzie	5
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 01:16	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101A	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	2	09265155301A	09/22/2009 07:50	Susan A Engle	5

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Analysis Report

Lancaster Laboratories Sample No. WW 5780045 **Group No. 1162417**
WI

MA3-TG1-3-091709-9 Groundwater
091709-7,5 02687.007.007.0001
Moss American

Collected: 09/17/2009 12:09 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG13 SDG#: KMA99-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	2.9	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	0.16	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.064	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	0.25	0.021	1
00774	Fluorene	86-73-7	1.6	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	0.59	0.043	1
00774	Pyrene	129-00-0	0.18 J	0.11	1
	Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.				
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.4	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	1.9	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.20	5
	The reporting limit(s) for the analyte(s) above was raised due to matrix interference.				
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	11.2	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	0.50 J	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780045

Group No. 1162417
WI

MA3-TG1-3-091709-9 Groundwater
091709-7,5 02687.007.007.0001
Moss American

Collected: 09/17/2009 12:09

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG13 SDG#: KMA99-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 405.1**		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	13.3	0.80	1
	EPA 410.2		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	28.0	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 14:16	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/23/2009 23:45	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/23/2009 23:45	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:36	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:15	K. Robert Caulfeild-James	5
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102A	09/18/2009 16:22	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101A	09/24/2009 20:01	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 01:37	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101A	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780046

Group No. 1162417
WI

MA3-TG2-1-091709-15 Groundwater
091709-7,6 02687.007.007.0001
Moss American

Collected: 09/17/2009 16:55

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG21 SDG#: KMA99-08

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	N.D.		0.51	1
00774	Acenaphthylene	208-96-8	N.D.		1.0	1
00774	Anthracene	120-12-7	0.029	J	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.		0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.		0.010	1
00774	Benzo(b)fluoranthene	205-99-2	0.011	J	0.0081	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.		0.061	1
00774	Benzo(k)fluoranthene	207-08-9	0.010	J	0.0081	1
00774	Chrysene	218-01-9	N.D.		0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.		0.020	1
00774	Fluoranthene	206-44-0	0.038	J	0.020	1
00774	Fluorene	86-73-7	0.13	J	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.041	1
00774	Naphthalene	91-20-3	N.D.		1.0	1
00774	Phenanthrene	85-01-8	0.21		0.041	1
00774	Pyrene	129-00-0	N.D.		0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	N.D.		0.2	1
08213	Ethylbenzene	100-41-4	N.D.		0.2	1
08213	Toluene	108-88-3	N.D.		0.2	1
08213	Total Xylenes	1330-20-7	N.D.		0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**		**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	N.D.		0.50	1
	EPA 353.2		**mg/l**		**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1
	EPA 365.1		**mg/l**		**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.		0.25	1
	EPA 415.1		**mg/l**		**mg/l**	
00273	Total Organic Carbon	n.a.	2.2		0.50	1
	EPA 350.2		**mg/l**		**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	N.D.		0.20	1
	EPA 365.3		**mg/l**		**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.		0.010	1
	EPA 405.1		**mg/l**		**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	N.D.		3.2	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780046

Group No. 1162417
WI

MA3-TG2-1-091709-15 Groundwater
091709-7,6 02687.007.007.0001
Moss American

Collected: 09/17/2009 16:55

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG21 SDG#: KMA99-08

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**		**mg/l**	
01553	Chemical Oxygen Demand	n.a.	6.1	J	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 14:54	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 00:37	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 00:37	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:37	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:16	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:27	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101A	09/24/2009 20:02	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 01:45	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101A	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780047 **Group No. 1162417**
WI

MA3-TG2-3-091709-12 Groundwater
091709-7,6 02687.007.007.0001
Moss American

Collected: 09/17/2009 15:07 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG23 SDG#: KMA99-09

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	N.D.		0.51	1
00774	Acenaphthylene	208-96-8	N.D.		1.0	1
00774	Anthracene	120-12-7	N.D.		0.020	1
00774	Benzo(a)anthracene	56-55-3	0.024	J	0.010	1
00774	Benzo(a)pyrene	50-32-8	0.041		0.010	1
00774	Benzo(b)fluoranthene	205-99-2	0.042		0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	0.070	J	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	0.039		0.0082	1
00774	Chrysene	218-01-9	0.062	J	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	0.048	J	0.020	1
00774	Fluoranthene	206-44-0	0.038	J	0.020	1
00774	Fluorene	86-73-7	N.D.		0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	0.070	J	0.041	1
00774	Naphthalene	91-20-3	N.D.		1.0	1
00774	Phenanthrene	85-01-8	N.D.		0.041	1
00774	Pyrene	129-00-0	N.D.		0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	N.D.		0.2	1
08213	Ethylbenzene	100-41-4	N.D.		0.2	1
08213	Toluene	108-88-3	N.D.		0.2	1
08213	Total Xylenes	1330-20-7	N.D.		0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**		**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	0.69	J	0.50	1
	EPA 353.2		**mg/l**		**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1
	EPA 365.1		**mg/l**		**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	0.27	J	0.25	1
	EPA 415.1		**mg/l**		**mg/l**	
00273	Total Organic Carbon	n.a.	9.5		0.50	1
	EPA 350.2		**mg/l**		**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	0.42	J	0.20	1
	EPA 365.3		**mg/l**		**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.		0.010	1
	EPA 405.1		**mg/l**		**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	8.6		0.80	1

Lancaster Laboratories Sample No. WW 5780047

Group No. 1162417
WI

MA3-TG2-3-091709-12 Groundwater
091709-7,6 02687.007.007.0001
Moss American

Collected: 09/17/2009 15:07

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG23 SDG#: KMA99-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	22.7	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 16:12	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 01:04	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 01:04	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:41	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:17	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:31	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101A	09/24/2009 20:08	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 01:52	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101A	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780048

Group No. 1162417
WI

MA3-TG3-1-091709-10 Groundwater
091709-7,4 02687.007.007.0001
Moss American

Collected: 09/17/2009 14:28

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG31 SDG#: KMA99-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0081	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0081	1
00774	Chrysene	218-01-9	N.D.	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	N.D.	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.040	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	0.054 J	0.040	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	0.87 J	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	0.044 J	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	10.3	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	N.D.	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	N.D.	3.1	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780048 **Group No. 1162417**
WI

MA3-TG3-1-091709-10 Groundwater
091709-7,4 02687.007.007.0001
Moss American

Collected: 09/17/2009 14:28

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG31 SDG#: KMA99-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	25.8	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 16:51	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 01:30	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 01:30	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:42	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:21	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:32	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101A	09/24/2009 20:09	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 01:59	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101A	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780049 **Group No. 1162417**
WI

MA3-TG3-3-091709-11 Groundwater
091709-7,4 02687.007.007.0001
Moss American

Collected: 09/17/2009 14:30 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG33 SDG#: KMA99-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	0.031 J	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	0.069 J	0.021	1
00774	Fluorene	86-73-7	0.13 J	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	0.077 J	0.042	1
00774	Pyrene	129-00-0	N.D.	0.11	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1 J	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	1.7	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.20	5
	The reporting limit(s) for the analyte(s) above was raised due to matrix interference.				
00219	Nitrite Nitrogen	14797-65-0	0.017 J	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	9.4	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	N.D.	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	19.8	0.80	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780049

Group No. 1162417
WI

MA3-TG3-3-091709-11 Groundwater
091709-7,4 02687.007.007.0001
Moss American

Collected: 09/17/2009 14:30

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG33 SDG#: KMA99-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	25.4	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 17:30	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 01:57	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 01:57	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:42	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:22	K. Robert Caulfeild-James	5
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:36	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101A	09/24/2009 20:11	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 02:07	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101A	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780050 **Group No. 1162417**
WI

MA3-TG4-1-091709-6 Groundwater
091709-7,3 02687.007.007.0001
Moss American

Collected: 09/17/2009 10:49 Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG41 SDG#: KMA99-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.020	1
00774	Benzo(a)anthracene	56-55-3	0.034 J	0.010	1
00774	Benzo(a)pyrene	50-32-8	0.049	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	0.057	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	0.050	0.0082	1
00774	Chrysene	218-01-9	0.087 J	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	0.042 J	0.020	1
00774	Fluoranthene	206-44-0	N.D.	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	0.069 J	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.2	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	N.D.	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.20	5
	The reporting limit(s) for the analyte(s) above was raised due to matrix interference.				
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	8.1	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	N.D.	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	N.D.	2.7	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780050

Group No. 1162417
WI

MA3-TG4-1-091709-6 Groundwater
091709-7,3 02687.007.007.0001
Moss American

Collected: 09/17/2009 10:49

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG41 SDG#: KMA99-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	20.5	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 18:09	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 02:23	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 02:23	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:43	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:24	K. Robert Caulfeild-James	5
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:37	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101A	09/24/2009 20:12	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 02:28	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101A	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780051 **Group No. 1162417**
WI

MA3-TG4-3-091709-7 Groundwater
091709-7,3 02687.007.007.0001
Moss American

Collected: 09/17/2009 10:55 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG43 SDG#: KMA99-13

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	N.D.		0.53	1
00774	Acenaphthylene	208-96-8	N.D.		1.1	1
00774	Anthracene	120-12-7	N.D.		0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.		0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.		0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.		0.0085	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.		0.064	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.		0.0085	1
00774	Chrysene	218-01-9	N.D.		0.064	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.		0.021	1
00774	Fluoranthene	206-44-0	N.D.		0.021	1
00774	Fluorene	86-73-7	N.D.		0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.042	1
00774	Naphthalene	91-20-3	N.D.		1.1	1
00774	Phenanthrene	85-01-8	N.D.		0.042	1
00774	Pyrene	129-00-0	N.D.		0.11	1
GC Volatiles	**SW-846 8021B**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	N.D.		0.2	1
08213	Ethylbenzene	100-41-4	N.D.		0.2	1
08213	Toluene	108-88-3	0.9	J	0.2	1
08213	Total Xylenes	1330-20-7	N.D.		0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**		**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	0.80	J	0.50	1
	EPA 353.2		**mg/l**		**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1
	EPA 365.1		**mg/l**		**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.		0.25	1
	EPA 415.1		**mg/l**		**mg/l**	
00273	Total Organic Carbon	n.a.	9.3		0.50	1
	EPA 350.2		**mg/l**		**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	0.38	J	0.20	1
	EPA 365.3		**mg/l**		**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.		0.010	1
	EPA 405.1		**mg/l**		**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	N.D.		2.0	1

Lancaster Laboratories Sample No. WW 5780051

Group No. 1162417
WI

MA3-TG4-3-091709-7 Groundwater
091709-7,3 02687.007.007.0001
Moss American

Collected: 09/17/2009 10:55

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG43 SDG#: KMA99-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	25.0	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 18:47	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 02:50	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 02:50	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:44	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101B	09/21/2009 11:25	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:39	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101B	09/24/2009 20:13	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 02:35	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101B	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780052 **Group No. 1162417**
WI

MA3-TG5-1-091709-3 Groundwater
091709-7,2 02687.007.007.0001
Moss American

Collected: 09/17/2009 09:05 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG51 SDG#: KMA99-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0084	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0084	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.8	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	N.D.	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	3.8	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	0.24 J	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	N.D.	1.6	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780052

Group No. 1162417
WI

MA3-TG5-1-091709-3 Groundwater
091709-7,2 02687.007.007.0001
Moss American

Collected: 09/17/2009 09:05

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG51 SDG#: KMA99-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	10.2	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 19:26	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A94A	09/24/2009 03:17	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A94A	09/24/2009 03:17	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101A	09/25/2009 09:45	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101A	09/21/2009 11:26	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:40	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101B	09/24/2009 20:14	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 02:43	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101A	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101B	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780053 **Group No. 1162417**
WI

MA3-TG5-3-091709-4 Groundwater
091709-7,2 02687.007.007.0001
Moss American

Collected: 09/17/2009 09:22 Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG53 SDG#: KMA99-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.54	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.022	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0087	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.065	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0087	1
00774	Chrysene	218-01-9	N.D.	0.065	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.022	1
00774	Fluoranthene	206-44-0	0.059 J	0.022	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.043	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.043	1
00774	Pyrene	129-00-0	N.D.	0.11	1
	Due to the nature of the sample matrix, a reduced aliquot was used for analysis. The reporting limits were raised accordingly.				
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.3	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	N.D.	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	4.9	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	0.47 J	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	N.D.	2.3	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780053 **Group No. 1162417**
WI

MA3-TG5-3-091709-4 Groundwater
091709-7,2 02687.007.007.0001
Moss American

Collected: 09/17/2009 09:22 Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG53 SDG#: KMA99-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	13.6	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 20:05	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09265A53A	09/24/2009 01:07	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	09265A53A	09/24/2009 01:07	Martha L Seidel	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101B	09/25/2009 09:46	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106101A	09/21/2009 11:27	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:41	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101B	09/24/2009 20:15	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501A	09/22/2009 02:50	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101B	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101B	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780054 **Group No. 1162417**
WI

MA3-TG6-1-091709-5 Groundwater
091709-7,1 02687.007.007.0001
Moss American

Collected: 09/17/2009 11:30 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG61 SDG#: KMA99-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	0.027 J	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	0.0090 J	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0082	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	0.038 J	0.021	1
00774	Fluorene	86-73-7	0.13 J	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	1.8	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	0.30 J	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	10.3	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	0.65	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	11.8	0.80	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780054 **Group No. 1162417**
WI

MA3-TG6-1-091709-5 Groundwater
091709-7,1 02687.007.007.0001
Moss American

Collected: 09/17/2009 11:30

Account Number: 11947

Submitted: 09/18/2009 09:30
Reported: 09/26/2009 at 15:13
Discard: 11/26/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

MAG61 SDG#: KMA99-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	25.8	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 20:44	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A94A	09/24/2009 16:25	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A94A	09/24/2009 16:25	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101B	09/25/2009 09:47	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106102A	09/21/2009 12:24	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:42	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101B	09/24/2009 20:16	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501B	09/22/2009 02:57	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101B	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101B	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780055 **Group No. 1162417**
WI

MA3-TG6-3-091709-1 Groundwater
091709-7,1 02687.007.007.0001
Moss American

Collected: 09/17/2009 09:15 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG63 SDG#: KMA99-17*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	0.023 J	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0082	1
00774	Chrysene	218-01-9	N.D.	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	0.070 J	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1
Wet Chemistry	**EPA 351.2**		**mg/l**	**mg/l**	
00217	Kjeldahl Nitrogen	n.a.	N.D.	0.50	1
	EPA 353.2		**mg/l**	**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	N.D.	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	EPA 365.1		**mg/l**	**mg/l**	
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.25	1
	EPA 415.1		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	6.9	0.50	1
	EPA 350.2		**mg/l**	**mg/l**	
00221	Ammonia Nitrogen	7664-41-7	0.53 J	0.20	1
	EPA 365.3		**mg/l**	**mg/l**	
00226	Ortho-Phosphate as P	7723-14-0	N.D.	0.010	1
	EPA 405.1		**mg/l**	**mg/l**	
00235	Biochemical Oxygen Demand	n.a.	N.D.	2.2	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5780055 **Group No. 1162417**
WI

MA3-TG6-3-091709-1 Groundwater
091709-7,1 02687.007.007.0001
Moss American

Collected: 09/17/2009 09:15 Account Number: 11947

Submitted: 09/18/2009 09:30 Tronox LLC
Reported: 09/26/2009 at 15:13 PO Box 268859
Discard: 11/26/2009 Oklahoma City OK 73126-8859

MAG63 SDG#: KMA99-17*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**EPA 410.2**		**mg/l**	**mg/l**	
01553	Chemical Oxygen Demand	n.a.	17.0	2.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09261WAE026	09/23/2009 21:23	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09261WAE026	09/19/2009 07:45	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A94A	09/24/2009 20:23	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A94A	09/24/2009 20:23	Marie D John	1
00217	Kjeldahl Nitrogen	EPA 351.2	1	09266108101B	09/25/2009 09:47	K. Robert Caulfeild-James	1
00220	Nitrate Nitrogen	EPA 353.2	1	09264106102A	09/21/2009 12:25	K. Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	09261105102B	09/18/2009 16:44	Venia B McFadden	1
00345	Total Phosphorus as PO4 water	EPA 365.1	1	09267110101B	09/24/2009 20:20	Joseph E McKenzie	1
00273	Total Organic Carbon	EPA 415.1	1	09265049501B	09/22/2009 03:19	James S Mathiot	1
01460	Total Kjeldahl Nitrogen Digest	EPA 351.2	1	09266108101B	09/23/2009 10:50	Nancy J Shoop	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	09267110101B	09/24/2009 10:10	Nancy J Shoop	1
00221	Ammonia Nitrogen	EPA 350.2	1	09267022101A	09/24/2009 18:00	Luz M Groff	1
00226	Ortho-Phosphate as P	EPA 365.3	1	09262022601A	09/19/2009 08:30	Daniel S Smith	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	09261023502A	09/18/2009 13:09	Hannah M Royer	1
01553	Chemical Oxygen Demand	EPA 410.2	1	09265155301A	09/22/2009 07:50	Susan A Engle	1

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Analysis Report

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162417
Reported: 09/26/09 at 03:13 PM

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: 09261WAE026	Sample number(s): 5780039-5780042,5780044-5780055							
Acenaphthene	N.D.	0.50	ug/l	75	78	61-102	5	30
Acenaphthylene	N.D.	1.0	ug/l	74	78	61-99	5	30
Anthracene	N.D.	0.020	ug/l	83	89	69-103	6	30
Benzo(a)anthracene	N.D.	0.010	ug/l	87	93	74-109	6	30
Benzo(a)pyrene	N.D.	0.010	ug/l	92	97	67-107	6	30
Benzo(b)fluoranthene	N.D.	0.0080	ug/l	91	97	76-110	6	30
Benzo(g,h,i)perylene	N.D.	0.060	ug/l	94	97	62-117	3	30
Benzo(k)fluoranthene	N.D.	0.0080	ug/l	93	98	77-109	6	30
Chrysene	N.D.	0.060	ug/l	89	96	74-111	7	30
Dibenz(a,h)anthracene	N.D.	0.020	ug/l	91	94	75-109	3	30
Fluoranthene	N.D.	0.020	ug/l	83	89	68-103	7	30
Fluorene	N.D.	0.10	ug/l	84	89	67-107	6	30
Indeno(1,2,3-cd)pyrene	N.D.	0.040	ug/l	100	104	81-122	4	30
Naphthalene	N.D.	1.0	ug/l	69	73	57-95	5	30
Phenanthrene	N.D.	0.040	ug/l	88	94	71-108	6	30
Pyrene	N.D.	0.10	ug/l	89	95	70-108	6	30
Batch number: 09265A53A	Sample number(s): 5780053							
Benzene	N.D.	0.2	ug/l	115	115	80-120	0	30
Ethylbenzene	N.D.	0.2	ug/l	115	115	80-120	0	30
Toluene	N.D.	0.2	ug/l	115	115	80-120	0	30
Total Xylenes	N.D.	0.6	ug/l	117	115	80-120	1	30
Batch number: 09265A94A	Sample number(s): 5780039-5780052							
Benzene	N.D.	0.2	ug/l	95	100	80-120	5	30
Ethylbenzene	N.D.	0.2	ug/l	95	100	80-120	5	30
Toluene	N.D.	0.2	ug/l	95	100	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	98	103	80-120	5	30
Batch number: 09266A94A	Sample number(s): 5780054-5780055							
Benzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Ethylbenzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Toluene	N.D.	0.2	ug/l	110	105	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	110	107	80-120	3	30
Batch number: 09261105102A	Sample number(s): 5780044-5780045							
Nitrite Nitrogen	N.D.	0.015	mg/l	99		90-110		
Batch number: 09261105102B	Sample number(s): 5780046-5780055							
Nitrite Nitrogen	N.D.	0.015	mg/l	99		90-110		
Batch number: 09264106101A	Sample number(s): 5780052-5780053							
Nitrate Nitrogen	N.D.	0.040	mg/l	107		90-110		
Batch number: 09264106101B	Sample number(s): 5780044-5780051							
Nitrate Nitrogen	N.D.	0.040	mg/l	107		90-110		

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162417
Reported: 09/26/09 at 03:13 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 09264106102A	Sample number(s): 5780054-5780055							
Nitrate Nitrogen	N.D.	0.040	mg/l	107		90-110		
Batch number: 09265049501A	Sample number(s): 5780044-5780053							
Total Organic Carbon	N.D.	0.50	mg/l	100		91-113		
Batch number: 09265049501B	Sample number(s): 5780054-5780055							
Total Organic Carbon	N.D.	0.50	mg/l	100		91-113		
Batch number: 09266108101A	Sample number(s): 5780044-5780052							
Kjeldahl Nitrogen	N.D.	0.50	mg/l	97		90-110		
Batch number: 09266108101B	Sample number(s): 5780053-5780055							
Kjeldahl Nitrogen	N.D.	0.50	mg/l	97		90-110		
Batch number: 09267110101A	Sample number(s): 5780044-5780050							
Total Phosphorus as PO4 water	N.D.	0.25	mg/l	96		89-110		
Batch number: 09267110101B	Sample number(s): 5780051-5780055							
Total Phosphorus as PO4 water	N.D.	0.25	mg/l	96		89-110		
Batch number: 09261023502A	Sample number(s): 5780044-5780055							
Biochemical Oxygen Demand				104	102	85-115	2	8
Batch number: 09262022601A	Sample number(s): 5780044-5780055							
Ortho-Phosphate as P	N.D.	0.010	mg/l	99		95-105		
Batch number: 09265155301A	Sample number(s): 5780044-5780055							
Chemical Oxygen Demand				98		86-107		
Batch number: 09267022101A	Sample number(s): 5780044-5780055							
Ammonia Nitrogen	N.D.	0.20	mg/l	93	92	85-105	1	5

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 09265A53A	Sample number(s): 5780053 UNSPK: 5780053								
Benzene	120		70-152						
Ethylbenzene	125		75-133						
Toluene	119		78-129						
Total Xylenes	130		67-155						
Batch number: 09265A94A	Sample number(s): 5780039-5780052 UNSPK: P779007								
Benzene	115	115	70-152	0	30				
Ethylbenzene	115	115	75-133	0	30				
Toluene	119	114	78-129	4	30				
Total Xylenes	118	115	67-155	3	30				

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162417
Reported: 09/26/09 at 03:13 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 09266A94A	Sample number(s): 5780054-5780055 UNSPK: 5780054								
Benzene	115		70-152						
Ethylbenzene	115		75-133						
Toluene	115		78-129						
Total Xylenes	115		67-155						
Batch number: 09261105102A	Sample number(s): 5780044-5780045 UNSPK: 5780045 BKG: 5780045								
Nitrite Nitrogen	93		90-110			N.D.	N.D.	0 (1)	20
Batch number: 09261105102B	Sample number(s): 5780046-5780055 UNSPK: 5780046 BKG: 5780046								
Nitrite Nitrogen	100		90-110			N.D.	N.D.	0 (1)	20
Batch number: 09264106101A	Sample number(s): 5780052-5780053 UNSPK: P779621 BKG: P779621								
Nitrate Nitrogen	102		90-110			0.12	0.12	1 (1)	2
Batch number: 09264106101B	Sample number(s): 5780044-5780051 UNSPK: P779851 BKG: P779851								
Nitrate Nitrogen	91		90-110			2.2	2.2	1	2
Batch number: 09264106102A	Sample number(s): 5780054-5780055 UNSPK: 5780055 BKG: 5780055								
Nitrate Nitrogen	94		90-110			N.D.	N.D.	0 (1)	2
Batch number: 09265049501A	Sample number(s): 5780044-5780053 UNSPK: 5780044 BKG: 5780044								
Total Organic Carbon	102		64-141			11.1	11.0	1	4
Batch number: 09265049501B	Sample number(s): 5780054-5780055 UNSPK: 5780054 BKG: 5780054								
Total Organic Carbon	100		64-141			10.3	10.3	0	4
Batch number: 09266108101A	Sample number(s): 5780044-5780052 UNSPK: 5780046 BKG: 5780046								
Kjeldahl Nitrogen	91		90-110			N.D.	N.D.	0 (1)	20
Batch number: 09266108101B	Sample number(s): 5780053-5780055 UNSPK: P780749 BKG: P780749								
Kjeldahl Nitrogen	95		90-110			N.D.	N.D.	0 (1)	20
Batch number: 09267110101A	Sample number(s): 5780044-5780050 UNSPK: 5780046 BKG: 5780046								
Total Phosphorus as PO4 water	98		90-110			N.D.	N.D.	0 (1)	3
Batch number: 09267110101B	Sample number(s): 5780051-5780055 UNSPK: P784520 BKG: P784520								
Total Phosphorus as PO4 water	101		90-110			N.D.	N.D.	0 (1)	3
Batch number: 09261023502A	Sample number(s): 5780044-5780055 UNSPK: 5780046 BKG: 5780049								
Biochemical Oxygen Demand	102	105	76-134	3	8	19.8	19.2	3	15
Batch number: 09262022601A	Sample number(s): 5780044-5780055 UNSPK: 5780055 BKG: 5780055								
Ortho-Phosphate as P	96	101	80-120	4	5	N.D.	N.D.	0 (1)	6
Batch number: 09265155301A	Sample number(s): 5780044-5780055 UNSPK: 5780051 BKG: 5780051								
Chemical Oxygen Demand	91	87	70-130	2	9	25.0	24.2	3 (1)	8
Batch number: 09267022101A	Sample number(s): 5780044-5780055 BKG: P783095								
Ammonia Nitrogen						0.34 J	0.42 J	22* (1)	2

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162417
Reported: 09/26/09 at 03:13 PM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PAH's in Water by HPLC
Batch number: 09261WAE026

	Nitrobenzene	Triphenylene
5780039	94	104
5780040	138*	7961*
5780041	94	101
5780042	89	100
5780044	109	14169*
5780045	90	98
5780046	91	97
5780047	95	100
5780048	96	101
5780049	99	106
5780050	95	103
5780051	95	103
5780052	97	103
5780053	97	102
5780054	85	93
5780055	106	107
Blank	84	98
LCS	100	102
LCSD	104	106
Limits:	67-111	77-122

Analysis Name: BTEX (8021)
Batch number: 09265A53A

	Trifluorotoluene-P
5780053	97
Blank	96
LCS	97
LCSD	97
MS	95
Limits:	69-129

Analysis Name: BTEX (8021)
Batch number: 09265A94A

	Trifluorotoluene-P
5780039	96
5780040	96
5780041	96
5780042	96
5780043	96
5780044	95
5780045	96
5780046	95
5780047	96
5780048	96
5780049	96

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162417
Reported: 09/26/09 at 03:13 PM

Surrogate Quality Control

5780050	96
5780051	96
5780052	96
Blank	96
LCS	96
LCSD	96
MS	95
MSD	96
Limits:	69-129

Analysis Name: BTEX (8021)
Batch number: 09266A94A
Trifluorotoluene-P

5780054	97
5780055	96
Blank	96
LCS	96
LCSD	95
MS	95
Limits:	69-129

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

A11947/1162417/5780039-55

(8)

COC ID: 091709-7

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	353.2-NO2	353.2-NO3	8021B-BTEX	8021B-BTEX						
						Filtered									
						Container	40ml-Glass Via	40ml-Glass Vi	40ml-Glass Vi	40ml-Glass Vi					
						Preservative	N/A	H2SO4	HCl	N/A					
	MA3-FB-091709-16	W		N	9/17/2009 17:30			3							
	MA3-MW34S-091709-14	W		N	9/17/2009 15:58			3							
	MA3-MW7S-091709-13	W		N	9/17/2009 15:52			3							
	MA3-MW7S-091709-13-DP	W		N	9/17/2009 15:52			3							
	MA3-TB-091709-2	W		N	9/17/2009 09:05				2						
	MA3-TG1-1-091709-8	W		N	9/17/2009 12:02	1	1	3							
	MA3-TG1-3-091709-9	W		N	9/17/2009 12:09	1	1	3							
	MA3-TG2-1-091709-15	W		N	9/17/2009 16:55	1	1	3							
	MA3-TG2-3-091709-12	W		N	9/17/2009 15:07	1	1	3							
	MA3-TG3-1-091709-10	W		N	9/17/2009 14:28	1	1	3							
	MA3-TG3-3-091709-11	W		N	9/17/2009 14:30	1	1	3							
	MA3-TG4-1-091709-6	W		N	9/17/2009 10:49	1	1	3							
	MA3-TG4-3-091709-7	W		N	9/17/2009 10:55	1	1	3							
	MA3-TG5-1-091709-3	W		N	9/17/2009 09:05	1	1	3							
	MA3-TG5-3-091709-4	W		N	9/17/2009 09:22	1	1	3							
	MA3-TG6-1-091709-5	W		N	9/17/2009 11:30	1	1	3							
	MA3-TG6-3-091709-1	W		N	9/17/2009 09:15	1	1	3							

Remarks/Comments

Sampled By

Lab Use Only

Temp of Cooler when Received, C: 1 | 2 | 3 | 4 | 5: 2.2

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
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]	1930 9/17/09						
						[signature]	9/18/09 0930

A11947/1162417/5780039-55

(3)

COC ID: 091709-8

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	8310-PAHS
					Filtered	
					Container	0mL Amber G
					Preservative	N/A
	MA3-FB-091709-16	W		N	9/17/2009 17:30	2
	MA3-MW34S-091709-14	W		N	9/17/2009 15:58	2
	MA3-MW7S-091709-13	W		N	9/17/2009 15:52	2
	MA3-MW7S-091709-13-DP	W		N	9/17/2009 15:52	2

Remarks/Comments

Sampled By

Lab Use Only

Temp of Cooler when Received, C: 1 | 2 | 3 | 4 | 5 4.0

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
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
Jamie Wilds	1930 9/17/09						
							9/18/09 0930

A11947/1162417/5780039-55

Chain of Custody Record

WESTON SOLUTIONS

COC ID: 091709-5

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	350.2-NH3	351.2-TKN,365.1-TP,410.2-COD	365.3-OP, 405.1-BOD	415.1-TOC	8310-PAHS					
Filtered							(W) 1000 mL								
Container						0ml-Round G	0ml-Round G	500ml-Plastic	ml-Round An	0mL Amber G					
Preservative						H2SO4	H2SO4	N/A	H3PO4	N/A					
	MA3-TG1-1-091709-8	W		N	9/17/2009 12:02	1	1	(W) 2 1	1	2					
	MA3-TG1-3-091709-9	W		N	9/17/2009 12:09	1	1	(W) 2 1	1	2					

Remarks/Comments

Sampled By

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
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
Jennifer Woods	1930 9/17/09						
							9/18/09 0930

A11947/1162417/578003 9-55

(6)

COC ID: 091709-6

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	350.2-NH3	351.2-TKN,365.1-TP,410.2-COD	365.3-OP, 405.1-BOD	415.1-TOC	8310-PAHS				
Filtered								(N) 1000 mL						
Container						0ml-Round G	0ml-Round G	500ml-Plastic	ml-Round Am	0mL Amber G				
Preservative						H2SO4	H2SO4	N/A	H3PO4	N/A				
	MA3-TG2-1-091709-15	W		N	9/17/2009 16:55	1	1	(N) 2 1	1	2				
	MA3-TG2-3-091709-12	W		N	9/17/2009 15:07	1	1	(N) 2 1	1	2				

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
				9.6

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
Jamie Walker	1930 9/17/09						9/18/09 0930

Sampled By

A11947/1162417/5780039-55

(2)

COC ID: 091709-4

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.007.0001 | 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	350.2-NH3	351.2-TKN,365.1-TP,410.2-COD	365.3-OP, 405.1-BOD	415.1-TOC	8310-PAHS					
						Filtered		(2) 100 ML							
						Container	500ml-Round G	500ml-Round G	500ml-Plastic	1000ml-Round Am	40mL Amber G				
						Preservative	H2SO4	H2SO4	N/A	H3PO4	N/A				
	MA3-TG3-1-091709-10	W		N	9/17/2009 14:28	1	1	(2) 2	1	2					
	MA3-TG3-3-091709-11	W		N	9/17/2009 14:30	1	1	(2) 2	1	2					

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C: 1 | 2 | 3 | 4 | 5 2.8

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
Jamie Waldo	1930 9/17/09						9/18/09 0930

Sampled By

A11947/1162417/5780039-55

(7)

COC ID: 091709-3

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	350.2-NH3	351.2-TKN,365.1-TP,410.2-COD	365.3-OP, 405.1-BOD	415.1-TOC	8310-PAHS					
						Filtered		(W) 1000 mL							
						Container	500ml-Round G	500ml-Round Plastic	1000ml-Round Am	40mL Amber G					
						Preservative	H2SO4	H2SO4	N/A	H3PO4	N/A					
	MA3-TG4-1-091709-6	W		N	9/17/2009 10:49	1	1	(W) 2 1	1	2					
	MA3-TG4-3-091709-7	W		N	9/17/2009 10:55	1	1	(W) 2 1	1	2					

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
				1.8

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
Jamie Wade	1930 9/17/09						
							9/18/09 0930

Sampled By

A11947 / 1162417 / 5780039-55

(4)

COC ID: 091709-2

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	350.2-NH3	351.2-TKN,365.1-TP,410.2-COD	365.3-OP, 405.1-BOD	415.1-TOC	8310-PAHS
						Filtered		1000 mL		
						Container	0ml-Round G	ml-Round G 500ml-Plastic	ml-Round Am	0mL Amber G
						Preservative	H2SO4	H2SO4	N/A	H3PO4	N/A
	MA3-TG5-1-091709-3	W		N	9/17/2009 09:05	1	1	2	1	2
	MA3-TG5-3-091709-4	W		N	9/17/2009 09:22	1	1	2	1	2

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

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

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
	1930 9/17/09						
							9/18/09 0930

Sampled By

A11947/1162417/5780039-55

(5)

COC ID: 091709-1

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	350.2-NH3	351.2-TKN,365.1-TP,410.2-COD	365.3-OP, 405.1-BOD	415.1-TOC	8310-PAHS
						Filtered		1000 mL		
						Container	00ml-Round G	00ml-Round G	500ml-Plastic	ml-Round An	0mL Amber G
						Preservative	H2SO4	H2SO4	N/A	H3PO4	N/A
	MA3-TG6-1-091709-5	W		N	9/17/2009 11:30	1	1	(MS) 2 1	1	2
	MA3-TG6-3-091709-1	W		N	9/17/2009 09:15	1	1	(MSD) 2 1	1	2

Remarks/Comments

Sampled By

Lab Use Only

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
Jamie Wadde	1930 9/17/09						
							9/18/09 0930

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: Kerr McGee

Date of Receipt: 9/18/09

Time of Receipt: 0930

Source Code: 50-1

Unpacker Emp. No.: 1454

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	04299465	2.8 c	TB	WI	Y	B	
2	↓	2.5 c	↓	↓	↓	↓	
3	↓	4.0 c	↓	↓	↓	↓	
4	↓	3.2 c	↓	↓	↓	↓	
5	↓	2.7 c	↓	↓	↓	↓	
6	↓	1.6 c	↓	↓	↓	↓	

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[signature]	9/18/09	1105	Unpacking
Doug Weiland	9/18/09	1110	Place in Storage or (Entry)
			Entry
			Entry

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: Kerr McGee

Date of Receipt: 9/18/09

Time of Receipt: 0930

Source Code: 50-1

Unpacker Emp. No.: 1454

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
7	040965	1.8.c	TB	WI	Y	B	
8	↓	2.2.c	↓	↓	↓	↓	
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
	9/18/09	1105	Unpacking
DA Westlund	9/18/09	1110	Place in Storage or Entry
			Entry
			Entry

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

405-775-5429

Prepared by:

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

October 01, 2009

Project: Moss American

Samples arrived at the laboratory on Saturday, September 19, 2009. The PO# for this group is ZAKW1KEOK0A90089. The group number for this submittal is 1162608.

Client Sample Description	Lancaster Labs (LLI) #
MA3-FB-091809-12 Groundwater	5781425
MA3-MW30S-091809-13 Groundwater	5781426
MA3-MW33S-091809-10 Groundwater	5781427
MA3-MW35S-091809-9 Groundwater	5781428
MA3-MW35S-091809-9MS Groundwater	5781429
MA3-MW35S-091809-9MSD Groundwater	5781430
MA3-MW37S-091809-7 Groundwater	5781431
MA3-MW39S-091809-11 Groundwater	5781432
MA3-MW9S-091809-8 Groundwater	5781433
MA3-MWA-091809-6 Groundwater	5781434
MA3-MWB-091809-2 Groundwater	5781435
MA3-MWC-091809-1 Groundwater	5781436
MA3-MWC-091809-1-DP Groundwater	5781437
MA3-MWD-091809-4 Groundwater	5781438
MA3-MWE-091809-5 Groundwater	5781439
MA3-TB-091809-3 Groundwater	5781440

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Lancaster Laboratories

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Analysis Report

ELECTRONIC COPY TO	Tronox LLC	Attn: Keith Watson
ELECTRONIC COPY TO	Weston Solutions, Inc.	Attn: Tom Graan
ELECTRONIC COPY TO	Tronox LLC	Attn: Sherron Hendricks
ELECTRONIC COPY TO	Tronox LLC	Attn: Roy Widmann
ELECTRONIC COPY TO	Weston Solutions	Attn: Andris Slesers
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300

Respectfully Submitted,

Chad A. Moline
Group Leader

Lancaster Laboratories

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Analysis Report

Sample Description: MA3-FB-091809-12 Groundwater
091809-3,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781425
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 15:45

Account Number: 11947

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

FB12- SDG#: KMB01-01FB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**		**ug/l**	
00774	Acenaphthene	83-32-9	N.D.		0.51	1
00774	Acenaphthylene	208-96-8	N.D.		1.0	1
00774	Anthracene	120-12-7	N.D.		0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.		0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.		0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.		0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.		0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.		0.0082	1
00774	Chrysene	218-01-9	N.D.		0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.		0.020	1
00774	Fluoranthene	206-44-0	N.D.		0.020	1
00774	Fluorene	86-73-7	N.D.		0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.041	1
00774	Naphthalene	91-20-3	N.D.		1.0	1
00774	Phenanthrene	85-01-8	N.D.		0.041	1
00774	Pyrene	129-00-0	N.D.		0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**		**ug/l**	
08213	Benzene	71-43-2	N.D.		0.2	1
08213	Ethylbenzene	100-41-4	N.D.		0.2	1
08213	Toluene	108-88-3	0.6	J	0.2	1
08213	Total Xylenes	1330-20-7	N.D.		0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 10:33	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A94A	09/24/2009 15:58	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A94A	09/24/2009 15:58	Marie D John	1

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Analysis Report

Sample Description: MA3-MW30S-091809-13 Groundwater
091809-3,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781426
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 15:57

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

30S13 SDG#: KMB01-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0083	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	1.5	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 11:12	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/24/2009 18:44	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/24/2009 18:44	Marie D John	1

Lancaster Laboratories

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Analysis Report

Sample Description: MA3-MW33S-091809-10 Groundwater
091809-3,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781427
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 15:05

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

33S10 SDG#: KMB01-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	150	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	12	1
00774	Anthracene	120-12-7	1.3	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0081	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0081	1
00774	Chrysene	218-01-9	N.D.	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	0.051 J	0.020	1
00774	Fluorene	86-73-7	77	0.51	5
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	76	1.0	1
00774	Phenanthrene	85-01-8	31	0.20	5
00774	Pyrene	129-00-0	N.D.	0.10	1

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	0.5 J	0.2	1
08213	Toluene	108-88-3	0.4 J	0.2	1
08213	Total Xylenes	1330-20-7	4.1	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 11:51	Mark A Clark	1
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/25/2009 01:08	Mark A Clark	5
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/24/2009 19:08	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/24/2009 19:08	Marie D John	1

Lancaster Laboratories

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Analysis Report

Sample Description: MA3-MW35S-091809-9 Groundwater
091809-1,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781428
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 12:49

Account Number: 11947

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

35S-9 SDG#: KMB01-04BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.080	1
00774	Benzo(a)anthracene	56-55-3	0.019 J	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0081	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0081	1
00774	Chrysene	218-01-9	0.082 J	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	0.51	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	0.051 J	0.041	1
00774	Pyrene	129-00-0	0.34 J	0.10	1

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for anthracene. The reporting limit for this compound was raised accordingly.

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 07:19	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/25/2009 01:30	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/25/2009 01:30	Marie D John	1

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Analysis Report

Sample Description: MA3-MW35S-091809-9MS Groundwater
091809-1,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781429
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 12:49

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
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Oklahoma City OK 73126-8859

35S-9 SDG#: KMB01-04MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	81	0.51	1
00774	Acenaphthylene	208-96-8	160	1.0	1
00774	Anthracene	120-12-7	2.7	0.020	1
00774	Benzo(a)anthracene	56-55-3	1.4	0.010	1
00774	Benzo(a)pyrene	50-32-8	1.5	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	1.2	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	12	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	1.2	0.0082	1
00774	Chrysene	218-01-9	5.8	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	3.0	0.020	1
00774	Fluoranthene	206-44-0	3.2	0.020	1
00774	Fluorene	86-73-7	18	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	6.6	0.041	1
00774	Naphthalene	91-20-3	150	1.0	1
00774	Phenanthrene	85-01-8	5.7	0.041	1
00774	Pyrene	129-00-0	20	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	25	0.2	1
08213	Ethylbenzene	100-41-4	25	0.2	1
08213	Toluene	108-88-3	24	0.2	1
08213	Total Xylenes	1330-20-7	75	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 07:58	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/25/2009 01:54	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/25/2009 01:54	Marie D John	1

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Analysis Report

Sample Description: MA3-MW35S-091809-9MSD Groundwater
091809-1,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781430
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 12:49

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

35S-9 SDG#: KMB01-04MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	82	0.52	1
00774	Acenaphthylene	208-96-8	160	1.0	1
00774	Anthracene	120-12-7	2.8	0.021	1
00774	Benzo(a)anthracene	56-55-3	1.5	0.010	1
00774	Benzo(a)pyrene	50-32-8	1.6	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	1.2	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	13	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	1.3	0.0083	1
00774	Chrysene	218-01-9	6.1	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	3.1	0.021	1
00774	Fluoranthene	206-44-0	3.3	0.021	1
00774	Fluorene	86-73-7	19	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	6.8	0.041	1
00774	Naphthalene	91-20-3	150	1.0	1
00774	Phenanthrene	85-01-8	5.9	0.041	1
00774	Pyrene	129-00-0	20	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	25	0.2	1
08213	Ethylbenzene	100-41-4	24	0.2	1
08213	Toluene	108-88-3	24	0.2	1
08213	Total Xylenes	1330-20-7	75	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 08:37	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/25/2009 02:18	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/25/2009 02:18	Marie D John	1

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Analysis Report

Sample Description: MA3-MW37S-091809-7 Groundwater
091809-2,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781431
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 12:52

Account Number: 11947

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

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37S-7 SDG#: KMB01-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	0.023 J	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0083	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	0.060 J	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	0.19 J	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 13:09	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/24/2009 19:32	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/24/2009 19:32	Marie D John	1

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Analysis Report

Sample Description: MA3-MW39S-091809-11 Groundwater
091809-3,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781432
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 14:56

Account Number: 11947

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

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39S11 SDG#: KMB01-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	2.2	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	4.3	1
00774	Anthracene	120-12-7	0.14	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0083	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	0.18	0.021	1
00774	Fluorene	86-73-7	0.86	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	0.13 J	0.10	1

Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for acenaphthylene. The reporting limit for this compound was raised accordingly.

GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 13:47	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/24/2009 19:56	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/24/2009 19:56	Marie D John	1

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Analysis Report

Sample Description: MA3-MW9S-091809-8 Groundwater
091809-3,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781433
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 12:53

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

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9S-8- SDG#: KMB01-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0082	1
00774	Chrysene	218-01-9	N.D.	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	N.D.	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 14:26	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/24/2009 20:20	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/24/2009 20:20	Marie D John	1

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Analysis Report

Sample Description: MA3-MWA-091809-6 Groundwater
091809-2,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781434
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 11:27

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
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A--6- SDG#: KMB01-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0083	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 15:05	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/24/2009 20:43	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/24/2009 20:43	Marie D John	1

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Analysis Report

Sample Description: MA3-MWB-091809-2 Groundwater
091809-1,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781435
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 09:01

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

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B--2- SDG#: KMB01-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0083	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 15:44	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09266A53A	09/24/2009 21:55	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	09266A53A	09/24/2009 21:55	Marie D John	1

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Analysis Report

Sample Description: MA3-MWC-091809-1 Groundwater
091809-2,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781436
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 08:57

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

C--1- SDG#: KMB01-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0082	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0082	1
00774	Chrysene	218-01-9	N.D.	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	N.D.	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 16:23	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09267A53A	09/25/2009 16:32	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	09267A53A	09/25/2009 16:32	Martha L Seidel	1

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Analysis Report

Sample Description: MA3-MWC-091809-1-DP Groundwater
091809-2,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781437
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 08:57

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

C-1FD SDG#: KMB01-11FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.51	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.020	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0081	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.061	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0081	1
00774	Chrysene	218-01-9	N.D.	0.061	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.020	1
00774	Fluoranthene	206-44-0	N.D.	0.020	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 17:02	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09267A53A	09/25/2009 16:56	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	09267A53A	09/25/2009 16:56	Martha L Seidel	1

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Analysis Report

Sample Description: MA3-MWD-091809-4 Groundwater
091809-1,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781438
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 10:26

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

D--4- SDG#: KMB01-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.52	1
00774	Acenaphthylene	208-96-8	N.D.	1.0	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0083	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.062	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0083	1
00774	Chrysene	218-01-9	N.D.	0.062	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.10	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.041	1
00774	Naphthalene	91-20-3	N.D.	1.0	1
00774	Phenanthrene	85-01-8	N.D.	0.041	1
00774	Pyrene	129-00-0	N.D.	0.10	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 17:40	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09267A53A	09/25/2009 17:20	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	09267A53A	09/25/2009 17:20	Martha L Seidel	1

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Analysis Report

Sample Description: MA3-MWE-091809-5 Groundwater
091809-2,4 02687.007.007.0001
Moss American

LLI Sample # WW 5781439
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 11:15

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Account Number: 11947

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

E--5- SDG#: KMB01-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8310**		**ug/l**	**ug/l**	
00774	Acenaphthene	83-32-9	N.D.	0.53	1
00774	Acenaphthylene	208-96-8	N.D.	1.1	1
00774	Anthracene	120-12-7	N.D.	0.021	1
00774	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
00774	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
00774	Benzo(b)fluoranthene	205-99-2	N.D.	0.0084	1
00774	Benzo(g,h,i)perylene	191-24-2	N.D.	0.063	1
00774	Benzo(k)fluoranthene	207-08-9	N.D.	0.0084	1
00774	Chrysene	218-01-9	N.D.	0.063	1
00774	Dibenz(a,h)anthracene	53-70-3	N.D.	0.021	1
00774	Fluoranthene	206-44-0	N.D.	0.021	1
00774	Fluorene	86-73-7	N.D.	0.11	1
00774	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.042	1
00774	Naphthalene	91-20-3	N.D.	1.1	1
00774	Phenanthrene	85-01-8	N.D.	0.042	1
00774	Pyrene	129-00-0	N.D.	0.11	1
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00774	PAH's in Water by HPLC	SW-846 8310	1	09264WAE026	09/24/2009 18:19	Mark A Clark	1
03337	PAH Water Extraction	SW-846 3510C	1	09264WAE026	09/22/2009 09:40	Cynthia J Salvatori	1
08213	BTEX (8021)	SW-846 8021B	1	09270A94A	09/29/2009 22:42	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09270A94A	09/29/2009 22:42	Katrina T Longenecker	1

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Analysis Report

Sample Description: MA3-TB-091809-3 Groundwater
091809-4 02687.007.007.0001
Moss American

LLI Sample # WW 5781440
LLI Group # 1162608
WI

Project Name: Moss American

Collected: 09/18/2009 09:30

Account Number: 11947

Submitted: 09/19/2009 10:20
Reported: 10/01/2009 at 13:49
Discard: 12/01/2009

Tronox LLC
PO Box 268859
Oklahoma City OK 73126-8859

-TB3- SDG#: KMB01-14TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**SW-846 8021B**		**ug/l**	**ug/l**	
08213	Benzene	71-43-2	N.D.	0.2	1
08213	Ethylbenzene	100-41-4	N.D.	0.2	1
08213	Toluene	108-88-3	N.D.	0.2	1
08213	Total Xylenes	1330-20-7	N.D.	0.6	1

General Sample Comments

State of Wisconsin Lab Certification No. 998035060

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08213	BTEX (8021)	SW-846 8021B	1	09269A94A	09/27/2009 23:39	Martha L Seidel	1
01146	GC VOA Water Prep	SW-846 5030B	1	09269A94A	09/27/2009 23:39	Martha L Seidel	1

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162608
Reported: 10/01/09 at 01:49 PM

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: 09264WAE026	Sample number(s): 5781425-5781439							
Acenaphthene	N.D.	0.50	ug/l	86		61-102		
Acenaphthylene	N.D.	1.0	ug/l	84		61-99		
Anthracene	N.D.	0.020	ug/l	92		69-103		
Benzo(a)anthracene	N.D.	0.010	ug/l	96		74-109		
Benzo(a)pyrene	N.D.	0.010	ug/l	106		67-107		
Benzo(b)fluoranthene	N.D.	0.0080	ug/l	100		76-110		
Benzo(g,h,i)perylene	N.D.	0.060	ug/l	103		62-117		
Benzo(k)fluoranthene	N.D.	0.0080	ug/l	102		77-109		
Chrysene	N.D.	0.060	ug/l	99		74-111		
Dibenz(a,h)anthracene	N.D.	0.020	ug/l	100		75-109		
Fluoranthene	N.D.	0.020	ug/l	93		68-103		
Fluorene	N.D.	0.10	ug/l	95		67-107		
Indeno(1,2,3-cd)pyrene	N.D.	0.040	ug/l	111		81-122		
Naphthalene	N.D.	1.0	ug/l	78		57-95		
Phenanthrene	N.D.	0.040	ug/l	98		71-108		
Pyrene	N.D.	0.10	ug/l	99		70-108		
Batch number: 09266A53A	Sample number(s): 5781426-5781435							
Benzene	N.D.	0.2	ug/l	120	115	80-120	4	30
Ethylbenzene	N.D.	0.2	ug/l	115	115	80-120	0	30
Toluene	N.D.	0.2	ug/l	115	115	80-120	0	30
Total Xylenes	N.D.	0.6	ug/l	118	117	80-120	1	30
Batch number: 09266A94A	Sample number(s): 5781425							
Benzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Ethylbenzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Toluene	N.D.	0.2	ug/l	110	105	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	110	107	80-120	3	30
Batch number: 09267A53A	Sample number(s): 5781436-5781438							
Benzene	N.D.	0.2	ug/l	120	120	80-120	0	30
Ethylbenzene	N.D.	0.2	ug/l	115	115	80-120	0	30
Toluene	N.D.	0.2	ug/l	115	115	80-120	0	30
Total Xylenes	N.D.	0.6	ug/l	118	118	80-120	0	30
Batch number: 09269A94A	Sample number(s): 5781440							
Benzene	N.D.	0.2	ug/l	110	110	80-120	0	30
Ethylbenzene	N.D.	0.2	ug/l	110	105	80-120	5	30
Toluene	N.D.	0.2	ug/l	110	105	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	110	108	80-120	2	30
Batch number: 09270A94A	Sample number(s): 5781439							
Benzene	N.D.	0.2	ug/l	105	110	80-120	5	30
Ethylbenzene	N.D.	0.2	ug/l	105	110	80-120	5	30
Toluene	N.D.	0.2	ug/l	105	110	80-120	5	30
Total Xylenes	N.D.	0.6	ug/l	107	113	80-120	6	30

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162608
Reported: 10/01/09 at 01:49 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 09264WAE026	Sample number(s): 5781425-5781439 UNSPK: 5781428								
Acenaphthene	79	80	67-99	2	30				
Acenaphthylene	78	78	66-97	2	30				
Anthracene	86	89	74-101	4	30				
Benzo(a)anthracene	92	96	78-106	5	30				
Benzo(a)pyrene	97	100	77-102	5	30				
Benzo(b)fluoranthene	96	100	79-108	4	30				
Benzo(g,h,i)perylene	98	101	68-116	4	30				
Benzo(k)fluoranthene	98	102	81-105	5	30				
Chrysene	93	97	78-108	5	30				
Dibenz(a,h)anthracene	97	100	75-104	4	30				
Fluoranthene	88	90	75-96	3	30				
Fluorene	89	90	73-103	2	30				
Indeno(1,2,3-cd)pyrene	108*	110*	78-106	3	30				
Naphthalene	73	73	61-94	1	30				
Phenanthrene	92	94	66-115	3	30				
Pyrene	94	97	73-105	4	30				
Batch number: 09266A53A	Sample number(s): 5781426-5781435 UNSPK: 5781428								
Benzene	125	125	70-152	0	30				
Ethylbenzene	125	120	75-133	4	30				
Toluene	120	120	78-129	0	30				
Total Xylenes	125	125	67-155	0	30				
Batch number: 09266A94A	Sample number(s): 5781425 UNSPK: P780054								
Benzene	115		70-152						
Ethylbenzene	115		75-133						
Toluene	115		78-129						
Total Xylenes	115		67-155						
Batch number: 09267A53A	Sample number(s): 5781436-5781438 UNSPK: P783947								
Benzene	125		70-152						
Ethylbenzene	125		75-133						
Toluene	125		78-129						
Total Xylenes	128		67-155						
Batch number: 09269A94A	Sample number(s): 5781440 UNSPK: P787069								
Benzene	115	110	70-152	4	30				
Ethylbenzene	110	110	75-133	0	30				
Toluene	110	110	78-129	0	30				
Total Xylenes	113	112	67-155	1	30				
Batch number: 09270A94A	Sample number(s): 5781439 UNSPK: P787073								
Benzene	130		70-152						

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162608
Reported: 10/01/09 at 01:49 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Ethylbenzene	120		75-133						
Toluene	123		78-129						
Total Xylenes	120		67-155						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PAH's in Water by HPLC
Batch number: 09264WAE026

	Nitrobenzene	Triphenylene
5781425	96	102
5781426	105	108
5781427	104	106
5781428	99	106
5781429	101	103
5781430	102	107
5781431	91	100
5781432	98	107
5781433	95	105
5781434	97	105
5781435	103	105
5781436	100	104
5781437	88	97
5781438	106	108
5781439	108	110
Blank	102	105
LCS	107	108
MS	101	103
MSD	102	107
Limits:	67-111	77-122

Analysis Name: BTEX (8021)
Batch number: 09266A53A

	Trifluorotoluene-P
5781426	97
5781427	97
5781428	96
5781429	97
5781430	97
5781431	96
5781432	96
5781433	97
5781434	97
5781435	96
Blank	96

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162608
Reported: 10/01/09 at 01:49 PM

Surrogate Quality Control

LCS	97
LCSD	96
MS	97
MSD	97
Limits:	69-129

Analysis Name: BTEX (8021)
Batch number: 09266A94A
Trifluorotoluene-P

5781425	96
Blank	96
LCS	96
LCSD	95
MS	95
Limits:	69-129

Analysis Name: BTEX (8021)
Batch number: 09267A53A
Trifluorotoluene-P

5781436	98
5781437	99
5781438	98
Blank	94
LCS	97
LCSD	97
MS	96
Limits:	69-129

Analysis Name: BTEX (8021)
Batch number: 09269A94A
Trifluorotoluene-P

5781440	96
Blank	97
LCS	96
LCSD	97
MS	96
MSD	96
Limits:	69-129

Analysis Name: BTEX (8021)
Batch number: 09270A94A
Trifluorotoluene-P

5781439	96
Blank	97
LCS	97
LCSD	96
MS	96
Limits:	69-129

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

Quality Control Summary

Client Name: Tronox LLC Group Number: 1162608
Reported: 10/01/09 at 01:49 PM

Surrogate Quality Control

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

11947 / 116260.08 / 5781425-40

COC ID: 091809-4

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.007.0001 | 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	8021B-BTEX	8021B-BTEX								
						Filtered									
						Container	40ml-Glass Via	40ml-Glass Vi							
						Preservative	HCl	N/A							
	MA3-FB-091809-12	W		N	9/18/2009 15:45	3									
	MA3-MW30S-091809-13	W		N	9/18/2009 15:57	3									
	MA3-MW33S-091809-10	W		N	9/18/2009 15:05	3									
	MA3-MW35S-091809-9	W		Y	9/18/2009 12:49	9									
	MA3-MW37S-091809-7	W		N	9/18/2009 12:52	3									
	MA3-MW39S-091809-11	W		N	9/18/2009 14:56	3									
	MA3-MW9S-091809-8	W		N	9/18/2009 12:53	3									
	MA3-MWA-091809-6	W		N	9/18/2009 11:27	3									
	MA3-MWB-091809-2	W		N	9/18/2009 09:01	3									
	MA3-MWC-091809-1	W		N	9/18/2009 08:57	3									
	MA3-MWC-091809-1-DP	W		N	9/18/2009 08:57	3									
	MA3-MWD-091809-4	W		N	9/18/2009 10:26	3									
	MA3-MWE-091809-5	W		N	9/18/2009 11:15	3									
	MA3-TB-091809-3	W		N	9/18/2009 09:30		2								

Remarks/Comments

Sampled By

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
				5.5

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]	9/18/09 1800						

11947 / 1162609 / 5781425-40

(1)

COC ID: 091809-2

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	8310-PAHS
					Filtered	
					Container	0mL Amber G
					Preservative	N/A
	MA3-MW37S-091809-7	W		N	9/18/2009 12:52	2
	MA3-MWA-091809-6	W		N	9/18/2009 11:27	2
	MA3-MWC-091809-1	W		N	9/18/2009 08:57	2
	MA3-MWC-091809-1-DP	W		N	9/18/2009 08:57	2
	MA3-MWE-091809-5	W		N	9/18/2009 11:15	2

Remarks/Comments

Sampled By

Lab Use Only

Temp of Cooler when Received, C

1	2	3	4	5
				1.5

COC Tape was present on outer package N
COC Tape was unbroken on outer package N
COC Tape ws present on sample N
COC Tape was unbroken on sample N

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

Relinquished By	Date / Time	Received By	Date / Time	Relinquished By	Date / Time	Received By	Date / Time
Jim Wade	9/18/09 1800						9/19/09 1020

11947/1162608/5781425-40

(2)

COC ID: 091809-3

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
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	8310-PAHS
					Filtered	
					Container	0mL Amber G
					Preservative	N/A
	MA3-FB-091809-12	W		N	9/18/2009 15:45	2
	MA3-MW30S-091809-13	W		N	9/18/2009 15:57	2
	MA3-MW33S-091809-10	W		N	9/18/2009 15:05	2
	MA3-MW39S-091809-11	W		N	9/18/2009 14:56	2
	MA3-MW9S-091809-8	W		N	9/18/2009 12:53	2

Remarks/Comments

Lab Use Only

Temp of Cooler when Received, C: 1 | 2 | 3 | 4 | 5 1/7

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
Jim Waids	9/18/09 1800						9/19/09 1020

Sampled By

11947/1162609/5781425-40 (3)

COC ID: 091809-1

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee

Site Name: Moss American | Contact Name: Tom Graan

W. O.: 02687.007.007.0001 | 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	8310-PAHS							
					Filtered								
					Container	40mL Amber G							
					Preservative	N/A							
	MA3-MW35S-091809-9	W		Y	9/18/2009 12:49	6							
	MA3-MWB-091809-2	W		N	9/18/2009 09:01	2							
	MA3-MWD-091809-4	W		N	9/18/2009 10:26	2							

Remarks/Comments

Sampled By

Lab Use Only

Temp of Cooler when Received, C: 1 2 3 4 5 4.0 C

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
Jane Walden	9/18/09 1800						9/19/09 0020

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration Receipt Documentation Log

Client/Project: Kerr McGee

Date of Receipt: 9/19/09

Time of Receipt: 1020

Source Code: 50-1

Unpacker Emp. No.: 1454

Shipping Container Sealed: YES (circled) NO

Custody Seal Present * : YES (circled) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled (circled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	[illegible]	1.5°C	TB	WI	Y	B	
2	↓	1.8°C	↓	↓	↓	↓	
3	↓	1.0°C	↓	↓	↓	↓	
4	↓	1.5°C	↓	↓	↓	↓	
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[signature]	9/19/09	1235	Unpacking to Storage
[signature]	9/19/09	1239	Place in Storage or Entry
			Entry
			Entry

2174.04

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Microbac

October 12, 2009

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

Work Order No.: ME0909816

RE: Kerr McGee / Moss American

Dear Tom Graan:

Microbac Laboratories, Inc. received 12 samples on 9/18/2009 9:30:00 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.

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 has been paginated in its entirety and 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.

Carey Gadzala

Carey A. Gadzala
Project Manager

Enclosures

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

Microbac

WORK ORDER SAMPLE SUMMARY

Date: *Monday, October 12, 2009*

CLIENT: Weston Solutions, Inc.
Project: Kerr McGee / Moss American
Lab Order: ME0909816

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0909816-01A	MA3-TG1-1-091709-8		9/17/2009 12:02:00 PM	9/18/2009
ME0909816-02A	MA3-TG1-3-091709-9		9/17/2009 12:09:00 PM	9/18/2009
ME0909816-03A	MA3-TG2-1-091709-15		9/17/2009 4:55:00 PM	9/18/2009
ME0909816-04A	MA3-TG2-3-091709-12		9/17/2009 3:07:00 PM	9/18/2009
ME0909816-05A	MA3-TG3-1-091709-10		9/17/2009 2:28:00 PM	9/18/2009
ME0909816-06A	MA3-TG3-3-091709-11		9/17/2009 2:30:00 PM	9/18/2009
ME0909816-07A	MA3-TG4-1-091709-6		9/17/2009 10:49:00 AM	9/18/2009
ME0909816-08A	MA3-TG4-3-091709-7		9/17/2009 10:55:00 AM	9/18/2009
ME0909816-09A	MA3-TG5-1-091709-3		9/17/2009 9:05:00 AM	9/18/2009
ME0909816-10A	MA3-TG5-3-091709-4		9/17/2009 9:22:00 AM	9/18/2009
ME0909816-11A	MA3-TG6-1-091709-5		9/17/2009 11:30:00 AM	9/18/2009
ME0909816-12A	MA3-TG6-3-091709-1		9/17/2009 9:15:00 AM	9/18/2009

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ANALYTICAL RESULTS

Date: *Monday, October 12, 2009*

Client: Weston Solutions, Inc.
Client Project: Kerr McGee / Moss American

Work Order: ME0909816
Received: 09/18/09 09:30

Analyses	Result	Units	Qual	Analyzed	Tech	Method
01A MA3-TG1-1-091709-8 -						*Collected: 09/17/09 12:02*
Total Aerobic Degrader Bacteria	**7400**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**57000**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
02A MA3-TG1-3-091709-9 -						*Collected: 09/17/09 12:09*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**15300**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
03A MA3-TG2-1-091709-15 -						*Collected: 09/17/09 16:55*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**310**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
04A MA3-TG2-3-091709-12 -						*Collected: 09/17/09 15:07*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**630**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
05A MA3-TG3-1-091709-10 -						*Collected: 09/17/09 14:28*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**900**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
06A MA3-TG3-3-091709-11 -						*Collected: 09/17/09 14:30*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**420**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
07A MA3-TG4-1-091709-6 -						*Collected: 09/17/09 10:49*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**18900**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
08A MA3-TG4-3-091709-7 -						*Collected: 09/17/09 10:55*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
09A MA3-TG5-1-091709-3 -						*Collected: 09/17/09 09:05*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**210**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
10A MA3-TG5-3-091709-4 -						*Collected: 09/17/09 09:22*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**1000**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
11A MA3-TG6-1-091709-5 -						*Collected: 09/17/09 11:30*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD

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Microbac

ANALYTICAL RESULTS

Date: *Monday, October 12, 2009*

Client:	Weston Solutions, Inc.	*Work Order:*	ME0909816
Client Project:	Kerr McGee / Moss American	*Received:*	09/18/09 09:30

Analyses	Result	Units	Qual	Analyzed	Tech	Method
Total Aerobic Bacteria	**450**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
12A MA3-TG6-3-091709-1 -						*Collected: 09/17/09 09:15*
Total Aerobic Degrader Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD
Total Aerobic Bacteria	**< 100**	cfu/ml		09/18/09 20:52	RJC	9215B MOD

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FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

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

U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
j	=	Analyte concentration detected betweeen 1/2 PQL and PQL (for TIC analytes only)
B	=	Detected in the associated Method Blank at a concentration above the routine PQL/RL
b	=	Detected in the associated Method Blank at a concentration above the Method Detection Limit but less than the routine PQL/RL
D	=	Surrogate recoveries are not calculated due to sample dilution
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if listed)
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	CCV	=	Continuing Calibration Verification			
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 requirements of the applicable accreditation, unless otherwise noted. Complete 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 #1755266)
- Indiana DEM approved support laboratory for solid waste and wastewater analyses
- Indiana SDH for the chemical analysis of drinking water (lab #C-45-03)
- Indiana SDH for the microbiological analysis of drinking water (lab #M-45-8)
- Kentucky DEP for the chemical analysis of drinking water (lab #90147)
- Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #75)
- New York SDH for the chemical analysis of air and emissions (lab #11909)
- North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations (certificate #597)
- Tennessee DEC for the chemical analysis of drinking water (lab #04017)
- Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

MICROBAC LOCATIONS, SERVICE CENTERS (SC) AND SATELLITE OFFICES (Sat)

Baltimore Division - Baltimore, MD
Camp Hill Division - Camp Hill, PA
Camp Hill Division (SC) - Pittston, PA
Chicagoland Division - Merrillville, IN
Chicagoland Division (SC) - Indianapolis, IN
Southern California Division - Corona, CA
Erie Division - Erie, PA
Fayetteville Division - Fayetteville, NC
Hauser Division - Boulder, CO
Kentucky Division - Louisville, KY
Kentucky Division (Sat) - Evansville, IN
Kentucky Division (Sat) - Lexington, KY
Kentucky Division (Sat) - Paducah, KY
Knoxville Division - Maryville, TN
Massachusetts Division - Worchester, MA
Microbac Corporate Office - Pittsburgh, PA
Microbac NY - Cortland Office - Cortland, NY
Microbac NY - Waverly Office - Waverly, NY
Ohio Valley Division - Marietta, OH
Pittsburgh Division - Warrendale, PA
Richmond Division - Richmond, VA
South Carolina Division - New Ellenton, SC
South Jersey Division - Laurel Springs, NJ
Southern Headquarters - Poquoson, VA
Southern Testing Division - Wilson, NC
Southern Testing Division (Sat) - Greensboro, NC
Venice Division - Venice, FL

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COOLER INSPECTION

Date: Monday, October 12, 2009

Client Name **Weston Solutions, Inc.**

Work Order Number **ME0909816**

Checklist completed by DPP | 9/18/2009 11:30:31 AM

Date / Time Received: **9/18/2009 9:30:00 AM**

Received by: DPP

Reviewed by CAG | 9/21/2009 1:23:55 PM

Carrier name: UPS

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 ☑
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 ☐	
If samples are preserved, are the preservatives identified?	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 temperatures	Cooler	Temp
	1	8 °C

VOA vials for aqueous samples have zero headspace? No VOA vials submitted ☑ Yes ☐ No ☐

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

General Comments:

Sample ID	Client Sample ID	Comments
ME0909816-01A	MA3-TG1-1-091709-8	
ME0909816-02A	MA3-TG1-3-091709-9	
ME0909816-03A	MA3-TG2-1-091709-15	
ME0909816-04A	MA3-TG2-3-091709-12	
ME0909816-05A	MA3-TG3-1-091709-10	
ME0909816-06A	MA3-TG3-3-091709-11	
ME0909816-07A	MA3-TG4-1-091709-6	
ME0909816-08A	MA3-TG4-3-091709-7	
ME0909816-09A	MA3-TG5-1-091709-3	
ME0909816-10A	MA3-TG5-3-091709-4	
ME0909816-11A	MA3-TG6-1-091709-5	
ME0909816-12A	MA3-TG6-3-091709-1	

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

COC ID: 091709-9

Chain of Custody Record

WESTON SOLUTIONS

Client: Kerr McGee
Site Name: Moss American
W. O.: 02687.007.007.0001
Lab: MICROBAC LABS
TAT:

Contact Name: Tom Graan
Contact Phone No.: 847-918-4142
Lab Contact: N. MCDONALD
Lab Phone: 219-932-1770

Lab ID	Sample ID	Matrix	PID	MS/MSD	Date-Time Collected	MICROBIAL ENUMERATION									
						Filtered									
						Container	00ml-Sterile Pl								
						Preservative	N/A								
	MA3-TG1-1-091709-8	W		N	9/17/2009 12:02	1									
	MA3-TG1-3-091709-9	W		N	9/17/2009 12:09	1									
	MA3-TG2-1-091709-15	W		N	9/17/2009 16:55	1									
	MA3-TG2-3-091709-12	W		N	9/17/2009 15:07	1									
	MA3-TG3-1-091709-10	W		N	9/17/2009 14:28	1									
	MA3-TG3-3-091709-11	W		N	9/17/2009 14:30	1									
	MA3-TG4-1-091709-6	W		N	9/17/2009 10:49	1									
	MA3-TG4-3-091709-7	W		N	9/17/2009 10:55	1									
	MA3-TG5-1-091709-3	W		N	9/17/2009 09:05	1									
	MA3-TG5-3-091709-4	W		N	9/17/2009 09:22	1									
	MA3-TG6-1-091709-5	W		N	9/17/2009 11:30	1									
	MA3-TG6-3-091709-1	W		N	9/17/2009 09:15	1									

0909816
01A
02A
03A
04A
05A
06A
07A
08A
09A
10A
11A
12A

Remarks/Comments

Sampled By

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
Jamie Walden	9/17/09 1930						
							9-18-09/0930

8°C 15

Microbac

ME0909816 WESTON - VERNON HILLS 10/9/2009
Kerr McGee / Moss American, CA
250 West 84th Drive, Merrillville, IN 46410 TEL.800.536.8379 TEL.219.769.8378 FAX 219.769.1664

Tronox LLC
Moss American
KMA97

BTEX – 8021

Lab ID -	Sample ID	Date Collected	Date Analyzed
5632276	MW7S	3/25/09	3/27/09
5632277	MW7SMS	3/25/09	3/27/09
5632278	MW7SMSD	3/25/09	3/27/09
5632279	MW34S	3/25/09	3/27/09
5632280	MW39S	3/25/09	3/27/09
5632281	MW38S	3/25/09	3/27/09
5632282	TB	3/25/09	3/27/09
5632283	MW38SDUP	3/25/09	3/27/09

1. Holding Time / Sample Receipt
The samples were received and analyzed within required holding times.

2. Method Blank
One method blank (BLK5317) was included in this package. All method blank results were non-detect.

3. Surrogates
All surrogate recoveries were within required control limits.

4. Matrix Spike
An MS was performed on a sample MW7S. Naphthalene recoveries (35, 35MSD) were low outside control limits. Since naphthalene recoveries were also outside QC limits for the LCS/LCSD, the reviewer feels that positive naphthalene results in sample MS7S are flagged J and non-detects as UJ. All remaining BTEX recoveries were acceptable.

5. Laboratory Control Sample
One LCS sample was associated with the samples. The naphthalene results were low (39, 47LCSD) outside control limits. Naphthalene remains as qualified above. All remaining LCS/LCSD and RPD recoveries were within laboratory required control limits.

6. Performance Check Sample
Performance check sample results were acceptable.

7. Calibration
Calibration was acceptable.

8. Trip Blank / Field Blank
The TB was free of contamination.

9. Field Duplicates
Sample MW38S and MW38SDUP were field duplicates showing good overall correlation.

PAH- 8310

Lab ID -	Sample ID	Date Collected	Date Analyzed
5632276	MW7S	3/25/09	4/3/09
5632277	MW7SMS	3/25/09	4/1/09
5632278	MW7SMSD	3/25/09	4/1/09
5632279	MW34S	3/25/09	4/4, 4/6/09
5632280	MW39S	3/25/09	4/3/09
5632281	MW38S	3/25/09	4/3/09
5632283	MW38SDUP	3/25/09	4/3/09

1. Holding Time / Sample Receipt
The samples were received in good condition. The samples were extracted and analyzed within required holding times.

2. Method Blanks
One method blank (SBLKWA086) was included with the data. The method blank was free of contamination.

3. Surrogate Recovery
Due to matrix and multiple sample dilutions, the TRP was diluted out for sample MS34S. All remaining surrogate recoveries for TRP and NTB were within required control limits. No qualifications are required.

4. Matrix Spike
MS information was not presented with this sample set.

5. Laboratory Control Sample.
One LCS was associated with the samples. All LCS recoveries were within required control limits.

6. Performance Check Samples
All check sample results were acceptable.

7. Calibration
All average calibrations were within required control limits.

8. Field Duplicates
No field duplicates were identified with this sample set.

9. Other
Due to the nature of the sample matrix, reduced aliquots were used for several samples. Sample MW34S underwent 20 (initial), 400, and 1000X dilutions.

Date reviewed by: T. Balla Date: 10/12/09