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**PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT FOR  
NORTH MLK DRIVE PROPERTIES IN MILWAUKEE, WISCONSIN**

Dear Mr. Hatch:

Ramboll Environ US Corporation (Ramboll Environ) is pleased to present this Phase II Environmental Site Assessment (ESA) Report to Foley & Lardner, LLP and their client (the "Client") regarding seven subject properties located at 3300, 3306, 3314, and 3318 N. Martin Luther King, Jr. Drive and 3317, 3323, and 3333 North 4<sup>th</sup> Street in Milwaukee, Wisconsin (the "sites" or "properties"). A summary of the sites is provided below.

September 29, 2016

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Ref. 21-39942B

Address	Current Owner	Description of Property
3300 N. MLK Drive	City of Milwaukee	Open grass lot
3306 N. MLK Drive	City of Milwaukee c/o City Real Estate	Open grass lot
3314 N. MLK Drive	Dwight and Carmen Ivory	Store Building Single tenant, 1-story, retail use
3318 N. MLK Drive	Bachan Singh	Store Building Multi-story (store and apartments), retail/office/UNF (storage) non-warehouse space use
3317 North 4 <sup>th</sup> Street	MLK, LLC	Residential Dwelling 1.5-story duplex bungalow with 1,327 sq. feet of finished living area
3323 North 4 <sup>th</sup> Street	City of Milwaukee	Open grass lot
3333 North 4 <sup>th</sup> Street	City of Milwaukee c/o City Real Estate	Open asphalt parking lot with fence on north and south sides

**BACKGROUND**

Ramboll Environ completed a Phase I ESA in July 2016 at the site addresses provided above. Based on Ramboll Environ's assessment, the following recognized environmental conditions (RECs) were identified:

- Past Operations at the Site:** Historical Land Use Investigation reports identify a June 1934 occupancy permit for a dry cleaning agency at the 3314 property. The time period of operation was not documented. Historical dry-cleaning operations potentially included the use of chlorinated and/or petroleum-based solvents. No subsurface characterization activities are known to have been conducted at the site, and the site is not currently the subject of regulatory scrutiny related to contamination matters. The site is not listed on any environmental databases indicative of a release or of hazardous waste generation. Given that these operations occurred prior to the period when robust environmental regulations were in place and that potential impacts related to chlorinated solvent contamination can involve costly remedial actions, this finding is considered a REC.
- Potential Underground Storage Tank (UST):** During the July 7, 2016 site visit, Ramboll Environ identified a cut-off pipe and capped port protruding from the basement floor of the building on the 3318 property. The pipe and capped port are potentially associated with former oil storage features at the site identified by the Historical Land Use Investigation reports. The potential presence of an UST could not be confirmed. Records regarding USTs at the site were requested from the Milwaukee Department of Neighborhood Services, but they indicated they have no records regarding USTs at the site. Given that Ramboll Environ was not able to obtain information related to the potentially present UST installation or removal and evaluate the adequacy of the UST closure in the timeframe of the Phase I ESA, the former UST was initially identified in the Phase I ESA Report as a significant data gap. Because additional information was not available, it is now considered a REC.

Although not considered RECs based on currently available information, Ramboll Environ identified the following other findings. The term “other finding” is not defined by ASTM; rather, Ramboll Environ uses the term to connote areas of contingent risk that are not clearly defined by the ASTM Standard.

- Past Light Industrial Operations at the Site:** The site has been used for various commercial and light industrial purposes since at least the early 1930s. Prior operations have included electric shops (1930s), a sheet metal shop (1930s), dry cleaning services (mid-1930s and 1970 to 1975), and a tire and battery shop (1930s). Additionally, there is no readily available information as to the specific use of chemicals during this time period. These historical operations (i.e., those conducted between site development prior to the 1930s and the early 1980s) predated the enactment of robust environmental regulations related to the handling, storage, and disposal of hazardous chemicals. The site is not listed on any environmental databases indicative of a release or of hazardous waste generation. While Ramboll Environ cannot rule out the possibility that contamination is present at the subject site due to the operations of the past site occupants, there is no indication that such contamination (if any) would be widespread.
- Historical Storage and Use of Oils and Fuels:** According to the Historical Land Use Investigation for 3306-10 N. Dr. Martin Luther King, Jr. Drive, two applications for permits were submitted in December 1949 for installation of oil storage inside of the existing apartment building. Based on the residential use of this property at the time of the application, it is possible that fuel oil was used for building heat. The Historical Land Use Investigation for 3314 N. Dr. Martin Luther King, Jr. Drive indicates that an application was submitted in 1980 for the installation of one 1,000-gallon L.P. tank. Facility personnel possessed no information regarding potential former petroleum product storage at the site. Additionally, during the July 15, 2016 visit, Ramboll Environ identified one approximately 250-gallon aboveground storage tank (AST) with unknown contents in the basement of the 3317 property. Ramboll Environ could not access all sides of the tank for inspection, but the visible areas of the AST appeared to be in good condition. There was no visual evidence of significant releases, and the concrete floor below the tank was appeared to be intact. Based on the presence of an AST in the residence on the 3317

property, it is likely that other ASTs were historically used on the site in connection with residential land use.

- **Areas Filled by Non-Natural Causes:** Ramboll Environ identified general trash throughout the grassy area surrounding the 3318 property building. Based on the location of the properties in a formerly industrial area, it is also possible that urban fill materials were used on the site; however, there is no information available indicating whether fill material has been brought to the site. In addition, the method used to raze previous buildings on site is unknown; therefore, it is possible that the site contains buried demolition debris due to previous demolition of structures on site.
- **Potential Migration of Contamination from Off-site Properties:** Three properties located potentially upgradient of (but not adjacent to) the subject site are listed with open statuses on databases indicative of potential soil and groundwater contamination. Specifically, the property located at 3111 North 8<sup>th</sup> Street, located approximately 0.4 miles southwest of the subject site, contains residual soils contaminated by volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and lead. A former service station, located approximately 0.4 miles southwest of the subject site, is listed as having a leaking UST (LUST) with open status and confirmed groundwater, soil, and off-site petroleum contamination. 1100 W. Center Street, located approximately 0.9 miles southwest of the subject site, is listed for contamination from lead, chlorinated solvents, cyanide, and PAHs identified in site soils and groundwater and potentially in the adjacent right of way. Based on the available information, there is no indication as to whether contamination from the noted properties is migrating to the subject site; however, their distance from the subject site makes it unlikely for contamination to have migrated onto the subject site. Additionally, a property located potentially upgradient and adjacent to the subject site is listed on the Environmental Data Resources, Inc. (EDR) Historical Gas Station database. Specifically, the property is located at 450 Concordia Avenue W., located approximately 0.02 miles southwest of the subject property. This property is listed as operating a gasoline and oil service station in 1935 and 1947 and an automobile repair shop in 1952. The site is not listed on any environmental databases indicative of a release or of hazardous waste generation; however, given its history of use and proximity, it is a potential environmental concern to the subject site if the former fueling operations have adversely affected soil and groundwater in the site area.

Based on the RECs and other findings identified in the Phase I ESA, Ramboll Environ conducted this Phase II ESA to evaluate the potential for impacts to the site soil and groundwater. The Phase II ESA was conducted in accordance with our proposal dated August 18, 2016.

### **SUBSURFACE INVESTIGATION ACTIVITIES**

The objective of the Phase II ESA was to address the environmental concerns identified in the July 2016 Phase I ESA conducted by Ramboll Environ and to evaluate the potential risk to soil and groundwater. On September 7 and 8, 2016, Ramboll Environ conducted subsurface investigation activities at the site to assess the quality of the soil and groundwater.

On September 7, 2016, Ramboll Environ advanced four soil probes (B-1 through B-4), which were converted into temporary monitoring wells. The contingency hand auger (HA-1) was not conducted, based on further evaluation of the piping in the building basement at 3318 N. Martin Luther King, Jr. Drive, as described below. The soil boring and temporary monitoring well locations are depicted on Figure 1. The soil probe locations and rationale for their placement are summarized as follows.

Soil Probe/ Temporary Well	Relative Location	Justification
B-1	3318 property, northeast side of building	To evaluate area downgradient of possible UST and potential for non-natural fill.
B-2	3314 property, east side of building	To evaluate former drycleaner and potential for non-natural fill.
B-3	3314 property, east side of site	To evaluate former drycleaner, other former historical operations, and potential for non-natural fill.
B-4	3300 property, southwest corner of site	To evaluate off-site sources, particularly historic gas stations across intersection, and potential for non-natural fill.

In addition to the soil and groundwater sampling, Ramboll Environ evaluated for the potential for an UST, to be located beneath the basement of the 3318 property. The private utility locator screened the area in the basement of the 3318 property where disconnected piping was observed, during the Phase I ESA site visit, to determine the approximate configuration of the underground metallic system and to determine whether it is an abandoned UST. The area surrounding the disconnected piping was screened using a metal detector and radio/audio wave transmitter. Based on these results, it appears that the piping is related to a sewer cleanout. As such, the contingency hand auger was not conducted in this area.

### Soil Sampling

Soil borings were advanced utilizing a direct push technology (DPT) drill rig with a 2-inch diameter drive rod to collect a continuous soil sample. Soil borings B-1 through B-4 were advanced to a depth of approximately 20 feet below ground surface (bgs). Soil samples were collected continuously from the ground surface through the depth of the borings for classification and field screening. The soil samples were described in the field with respect to the soil type, grain size distribution, color (or discoloration), odor, and moisture content. Field observations from the borings were recorded on soil boring logs, provided as Attachment A.

The soil samples were screened in the field for the presence of potential VOCs using a 10.6 electron volt (EV) photoionization detector (PID) and PID readings were recorded on the soil boring logs. Prior to screening the PID was calibrated in the field according to manufacturer's instructions, using 100 parts per million (ppm) isobutylene span gas and air (zero gas), and checked between each screening event for proper response. One soil sample was selected from each boring for laboratory analysis. Since no elevated PID readings were detected during the field screening, the soil samples were collected from the direct contact zone (0 to 4 feet bgs). Soil samples were analyzed for VOCs using United States Environmental Protection Agency (USEPA) Method 8260, PAHs using USEPA Method 8270, and 8 Resource Conservation and Recovery Act (RCRA) metals using USEPA Method 6010.

### Temporary Monitoring Well Installation

Each of the soil borings were converted to a temporary groundwater monitoring well. The temporary wells (TW-1 through TW-4) were constructed using 1-inch diameter polyvinyl chloride (PVC) and factory cut 0.010-inch slot size well screen. Medium-grained silica filter sand packs were placed from the bottom of the borehole to 1 to 2 feet above the top of each well screen. Following placement of the coarse sand pack, 0.5 to 2 feet of fine sand pack were placed, followed by granular bentonite to the ground surface. The newly-installed temporary wells were developed until clear water was produced to remove residual materials

remaining in the wells after installation and to re-establish the natural hydraulic flow conditions of the formations, which may have been disturbed by the well construction. Due to the low permeability clay formation present on site, groundwater recharge occurred slowly and three out of four of the temporary wells could not be sampled the same day they were installed. As such, Ramboll Environ returned to the site on September 8, 2016, to collect the remaining groundwater samples.

### **Groundwater Sampling**

Groundwater sampling was conducted in general compliance with Wisconsin Department of Natural Resources (WDNR) guidance, where applicable. Prior to the groundwater sampling activities, depth to groundwater measurements were made using a Heron electronic water level sensor, Model ET-94 (accuracy 0.01 feet) or similar equipment. The depth to groundwater, as well as the total well depth, were recorded in a bound field notebook. The monitoring wells were sampled using low-flow groundwater sampling techniques, which involve utilizing a peristaltic pump with disposable polyethylene tubing. Groundwater samples were analyzed for VOCs using USEPA Method 8260.

Upon completion of the sampling effort, the boreholes/temporary wells were abandoned in general accordance with Wisconsin Administrative Code (WAC) NR 141.25 and the surface was patched to approximately match existing ground surface conditions.

### **Sample Laboratory Analysis**

The soil and groundwater samples selected for laboratory analysis were containerized in laboratory-provided sample containers, preserved appropriately in accordance with the selected analytical methods. Following sample collection, each sample container was labeled with the sample location identification, date of sample collection, and intended analysis. The sample containers were placed in re-sealable plastic bags and packed in an iced, insulated container. A chain-of-custody form was filled out upon sampling completion and accompanied the insulated container of samples to the laboratory.

The soil and groundwater samples collected during the investigation were submitted to Pace Analytical Services, Inc. (Pace), a Wisconsin-certified laboratory for analysis. Samples were sent to the laboratory via courier. When transferring samples, the individuals relinquishing and receiving the samples signed and dated the chain-of-custody forms. The original chain-of-custody form accompanied the shipment; a copy was retained by the field sampler and filed with the field notes. All samples were submitted on a standard 10-day turnaround time.

### **Investigative Waste Management**

Following soil and groundwater sample collection activities, soil was placed into a 5-gallon covered plastic pail. Groundwater generated during the investigation was also placed into a 5-gallon pail. The soil and groundwater containing investigative waste will be temporarily staged on site until appropriate disposal methods are determined.

## **SUBSURFACE ASSESSMENT RESULTS**

### **Soil Results**

The soil observed during the subsurface investigation consisted of fill from the ground surface to a depth of 4 to 8 feet bgs. The fill generally consisted of re-worked natural soils with occasional crushed rock or brick. No non-exempt fill materials, such as foundry sand, cinders or ash, were observed. Natural soil, underlying the fill consists primarily of silt and clay, with a trace of fine gravel in some samples, to the terminal depths

of the borings, except at B-3 where sand was observed to 15 feet bgs. No visual and/or olfactory evidence of impacts was noted, and no elevated PID readings were recorded in any of the soil samples collected. The soil boring logs are included in Attachment A. Soil boring abandonment forms are also provided in Attachment A.

The soil sample laboratory analytical results are presented in Table 1, and the laboratory report is included in Attachment B. The soil analytical results were compared to the WAC NR 720 residual contaminant levels (RCLs) for the protection of human health from direct contact with soil and for the protection of groundwater. Results exceeding the RCLs are shown on Table 1 in bold and flagged indicating the type of exceedance. No VOCs above their respective laboratory limits of detection (LODs) were detected in any of the soil samples analyzed.

Concentrations of PAHs above their respective generic RCLs were detected in the shallow soil/fill samples from each of the boring locations. Benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene and/or indeno(1,2,3-cd)pyrene exceeded their respective RCLs in one or more soil/fill samples. Exceedances of non-industrial and industrial direct contact and groundwater pathway RCLs were detected. These concentrations may be associated with the historical uses of the subject property, the presence of urban fill, and/or potential incorporation of asphalt in the fill materials.

Metals were detected in each of the shallow soil/fill samples analyzed for this assessment; however, only the following metals concentrations exceeded their applicable generic RCLs and the established background threshold values (BTV):

- Arsenic was reported in each of the samples at concentrations of 6.8 to 12.4 mg/kg, above the generic RCLs for direct contact and the groundwater pathway. The soil samples from B-1 and B-3 were below the BTV of 8 mg/kg, while the soil samples from B-2 and B-4 exceeded the BTV.
- Cadmium was detected in the soil samples from B-2 and B-3 at concentrations of 1.5 mg/kg and 1.2 mg/kg, respectively, both above the groundwater pathway RCL (0.75 mg/kg) and the BTV (1 mg/kg). The cadmium concentrations detected were well below the generic non-industrial direct contact RCL of 70 mg/kg, and only slightly above the BTV.
- Lead was detected in the soil samples from B-2, B-3, and B-4 at concentrations of 809 mg/kg, 502 mg/kg and 129 mg/kg, respectively. Each of these samples exceed the groundwater pathway RCL and BTV of 27 mg/kg and 52 mg/kg, respectively. The sample from B-2 also slightly exceeded the industrial direct contact RCL of 800 mg/kg and the sample from B-3 exceeded the non-industrial direct contact RCL of 400 mg/kg.
- Selenium was detected in soil samples collected from B-2 and B-3 at concentrations of 1.1 mg/kg and 1.3 mg/kg, respectively, above the generic groundwater pathway RCL (0.52 mg/kg). There is no established BTV for selenium. The selenium concentrations detected were well below the generic non-industrial direct contact RCL of 391 mg/kg.

Metals were not detected in soil from B-1 above generic RCLs and BTVs. Arsenic, cadmium, lead, and selenium were detected in soil samples above groundwater pathway RCLs and/or BTVs in the remaining borings. Based on our experience, the generic groundwater pathway RCLs for metals are overly conservative and concentrations of the magnitude detected in B-2, B-3, and B-4 are unlikely to result in an exceedance of a groundwater quality standard.

Lead and arsenic were the only metals detected above their non-industrial direct contact RCL and BTV. Lead was above its non-industrial direct contact RCL in B-2 and B-3, while arsenic was above its BTV in B-2 and B-4.

### **Groundwater Results**

No visual and/or olfactory evidence of impacts was noted during the groundwater sample collection activities. Due to the low permeability clay formation present on site, groundwater recharge occurred slowly and three out of four of the temporary wells could not be sampled the same day they were installed. Groundwater was encountered at a depth of approximately 13 feet bgs during groundwater sampling the day after installation, which may not be reflective of stable groundwater depth on site. A longer period of time and multiple depth measurements would be required to determine stable groundwater depth in this environment.

The groundwater analytical results were tabulated and compared to the WAC NR 140 Enforcement Standards (ESs) and Preventive Action Limits (PALs). No VOCs were detected in the groundwater samples above the laboratory LODs, except for chloromethane, which was detected in one sample from TW-3. The chloromethane concentration at TW-3 was detected below the ES and PAL. It is likely an artifact of the sample preservation methodology which can occur when the methanol preservative comes into contact with trace organic matter in the sample. As such, the chloromethane detection is not considered a constituent of concern at the subject site. The groundwater analytical results are summarized in Table 2, and the laboratory report is provided in Attachment B.

### **Conclusions/Recommendations**

Based on the data collected to date, Ramboll Environ concludes the following:

- Ramboll Environ evaluated for the potential for an UST to be located beneath the basement of the 3318 property. A private utility locator screened the area in the basement of the 3318 property where disconnected piping was observed, during the Phase I ESA site visit, to determine the approximate configuration of the underground metallic system and to determine whether it is an abandoned UST. The area surrounding the disconnected piping was screened using a metal detector and radio/audio wave transmitter. Based on these results, it appears that the piping is related to a sewer cleanout and no UST was detected. Boring B-1, conducted in an assumed hydraulically downgradient location relative to this area, did not detect any evidence of a petroleum release.
- Historical Land Use Investigation reports identified a June 1934 occupancy permit for a dry cleaning agency at the 3314 property. The time period of operation was not documented, nor was it determined if dry cleaning operations, which included the use of chlorinated and/or petroleum-based solvents, were conducted on site. Based on the soil and groundwater data collected, evidence of dry-cleaning type impacts were not detected on site. Vapor intrusion for site redevelopment is not a concern based on the absence of volatile organics in soil and groundwater.
- Because no petroleum or chlorinated VOCs were detected in soil or groundwater on site, the historic use of petroleum products and oils on site as well as off site does not appear to have adversely affected the groundwater.
- Five to 8 feet of fill was detected across the site. The fill generally consisted of re-worked natural soils with occasional crushed rock or brick. No non-exempt fill materials, such as foundry sand, cinders or ash, were observed; therefore, site redevelopment will not require an exemption to construct on a historic fill site.

- Although no visual and/or olfactory evidence of impacts was noted during drilling and no elevated PID readings were recorded in any of the fill soil samples collected, PAHs and select metals were detected in fill soils above BTVs and/or generic RCLs in each of the borings. These PAH and/or metal detections are likely related to urban fills and/or asphalt incorporation in the fill, but can be the result of localized impacts due to past site uses. Further definition of the magnitude and extent of the impacts is required.
- Arsenic, cadmium, lead, and selenium were detected in fill samples above groundwater pathway RCLs; therefore, additional investigation including the installation of a WAC NR 141 monitoring well may be required to determine if groundwater has been adversely impacted by the low concentrations of metals and/or PAHs in the fill. Based on our experience, the generic groundwater pathway RCLs for metals are overly conservative and concentrations of the magnitude detected in B-2, B-3, and B-4 are unlikely to result in an exceedance of a groundwater quality standard but the groundwater testing would confirm whether the PAH and metal concentrations are below groundwater standards.
- Lead and arsenic were the only metals detected above their non-industrial direct contact RCL and/or BTVs. Lead was detected above its non-industrial direct contact RCL in B-2 and B-3, while arsenic was detected above its BTV in B-2 and B-4. The magnitude and extent of the RCL/BTV direct contact exceedances may need to be defined. Potential remedial actions can be incorporated into the redevelopment plan for the site. It is likely that a direct contact barrier or engineering control will be sufficient to address the shallow PAH and metals impacts present in the shallow soil/fill material, if left on site. A plan for handling and disposal of impacted soil during future construction activities is also recommended. Additional costs will be incurred for management and disposal of soils that are removed from the site as they will need to be landfilled or taken to a low hazard site for disposal.
- The detection of the PAHs and select metals in shallow site soil/fill above generic RCLs may be considered a reportable release for the site owner if provided with this information.


In summary, based on the environmental conditions discovered as a result of this assessment, the following actions are likely to be required in conjunction with the proposed redevelopment of the site and to reach regulatory case closure for the site:

- A direct contact barrier/engineering control will likely be required to prevent direct contact with impacted soil and infiltration of surface water through the impacted soil. Typically the direct contact barrier could consist of site buildings and associated paved parking/drive areas. In planned greenspace areas, generally 1 to 2 feet of clean soil cover is required to prevent direct contact to contaminated soil.
- Additional assessment may be required to define the extent of the PAH and/or metal impacts detected in the shallow soil samples. Installation of a groundwater monitoring well may also be required to evaluate whether the groundwater is affected by the PAHs and metals detected in the soil above the generic groundwater pathway RCLs.
- A materials handling plan should be developed to address future handling and disposal of impacted soil during the proposed site construction activities. Disposal of impacted soil that is to be removed from the site will be either at a licensed landfill or a low-hazard site, with prior approval from the WDNR.
- It may be possible to limit and/or focus further soil and groundwater investigative efforts based upon a final site development plan identifying areas of the site that will be capped with a direct contact barrier and a determination of soils to be excavated and removed from the site. A discussion with the WDNR project manager to determine whether, and what, additional assessment will be required may be appropriate.
- A GIS registry on the WDNR's database will also be required as a component of case closure.



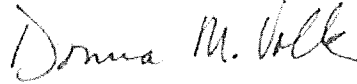
If you have any questions or need further information, please contact us.

Yours sincerely,



**Jeanne M. Tarvin, PG, CPG**  
Principal

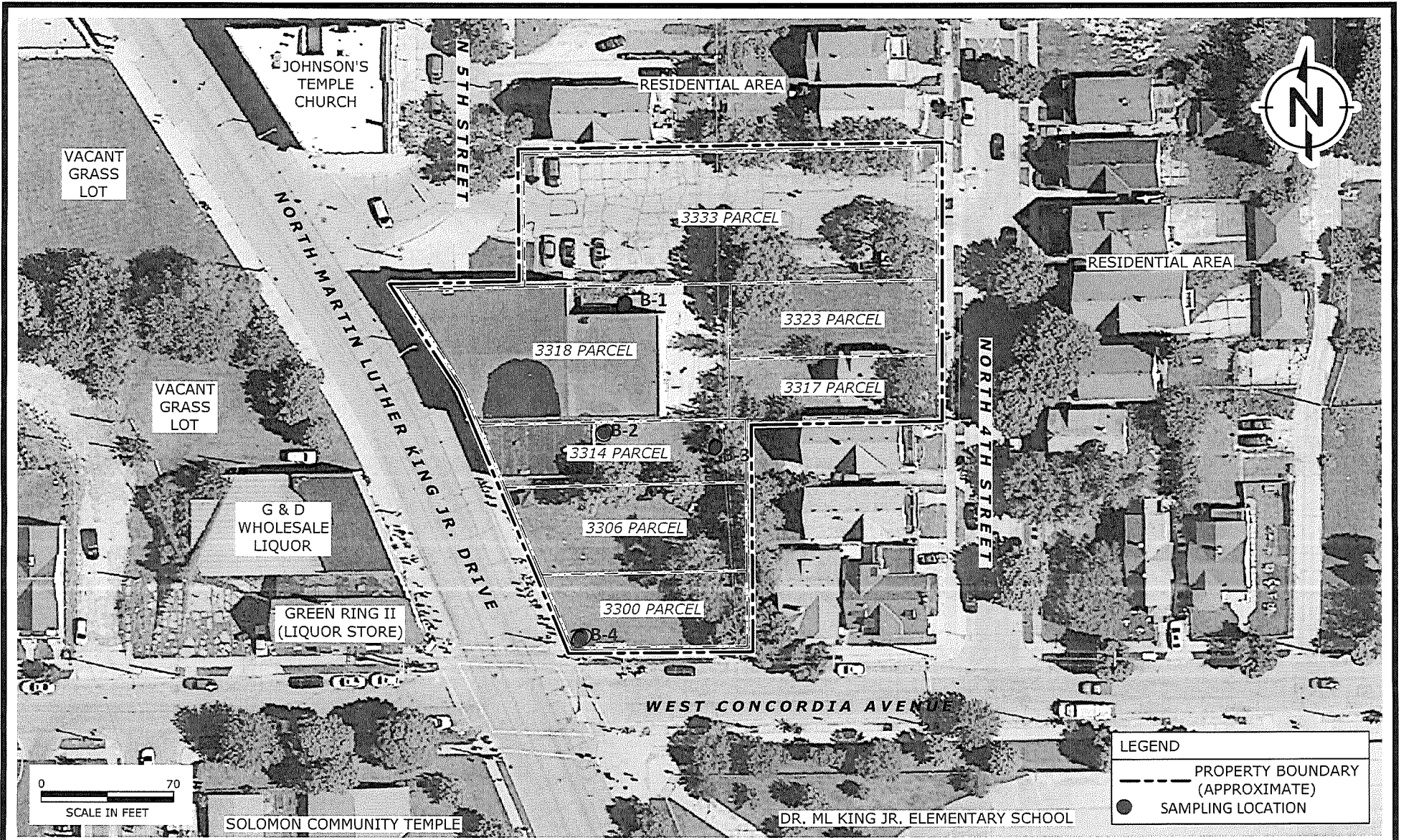
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## FIGURES



SOURCE: AERIAL IMAGERY: GOOGLE EARTH™, IMAGE DATED 6/18/2015.

**RAMBOLL ENVIRON**

**PHASE II ESA - SAMPLING LOCATIONS**

3300, 3306, 3314, AND 3318 N MARTIN LUTHER KING JR. DRIVE, AND  
 3317, 3323 AND 3333 N 4TH STREET  
 MILWAUKEE, WISCONSIN

FIGURE

**1**

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## **TABLES**

**Table 1: Soil Analytical Results**  
**MLK Drive Phase II ESA**  
**Ramboll-Environ Project No. 21-39942B**

Parameters	Soil RCLs			Surficial BTV	B-1 (2-3')	B-2 (2-3')	B-3 (1.5-2.5')	B-4 (2-3')
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		9/7/2016	9/7/2016	9/7/2016	9/7/2016
<b>VOCs (µg/kg)</b>								
Benzene	1,490	7,410	5.1	--	<25.0	<25.0	<25.0	<25.0
Bromobenzene	354,000	679,000	--	--	<25.0	<25.0	<25.0	<25.0
Bromochloromethane	232,000	976,000	--	--	<25.0	<25.0	<25.0	<25.0
Bromodichloromethane	390	1,960	0.3	--	<25.0	<25.0	<25.0	<25.0
Bromoform	23,600	115,000	2.3	--	<25.0	<25.0	<25.0	<25.0
Bromomethane	10,300	46,000	5.1	--	<69.9	<69.9	<69.9	<69.9
sec-Butylbenzene	145,000	145,000	--	--	<25.0	<25.0	<25.0	<25.0
tert-Butylbenzene	183,000	183,000	--	--	<25.0	<25.0	<25.0	<25.0
n-Butylbenzene	108,000	108,000	--	--	<25.0	<25.0	<25.0	<25.0
Carbon tetrachloride	854	4,250	3.9	--	<25.0	<25.0	<25.0	<25.0
Chlorobenzene	392,000	761,000	135.8	--	<25.0	<25.0	<25.0	<25.0
Chlorodibromomethane	7,600	34,100	32	--	<25.0	<25.0	<25.0	<25.0
Chloroethane	2,120,000	2,120,000	226.6	--	<67.0	<67.0	<67.0	<67.0
Chloroform	423	2,130	3.3	--	<46.4	<46.4	<46.4	<46.4
Chloromethane	171,000	720,000	15.5	--	<25.0	<25.0	<25.0	<25.0
2-Chlorotoluene	907,000	907,000	--	--	<25.0	<25.0	<25.0	<25.0
4-Chlorotoluene	253,000	253,000	--	--	<25.0	<25.0	<25.0	<25.0
1,2-Dibromo-3-chloropropane	7.63	98.8	0.17	--	<91.2	<91.2	<91.2	<91.2
1,2-Dibromoethane	46.5	230	0.0282	--	<25.0	<25.0	<25.0	<25.0
Dibromomethane	36,600	154,000	--	--	<25.0	<25.0	<25.0	<25.0
1,2-Dichlorobenzene	376,000	376,000	1,168	--	<25.0	<25.0	<25.0	<25.0
1,3-Dichlorobenzene	297,000	297,000	1,152.8	--	<25.0	<25.0	<25.0	<25.0
1,4-Dichlorobenzene	3,480	17,500	144	--	<25.0	<25.0	<25.0	<25.0
Dichlorodifluoromethane	135,000	571,000	3,086.3	--	<25.0	<25.0	<25.0	<25.0
1,1-Dichloroethane	4,720	23,700	482.4	--	<25.0	<25.0	<25.0	<25.0
1,2-Dichloroethane	608	3,030	2.84	--	<25.0	<25.0	<25.0	<25.0
1,1-Dichloroethene	342,000	1,190,000	5.02	--	<25.0	<25.0	<25.0	<25.0
cis-1,2-Dichloroethene	156,000	2,040,000	41.2	--	<25.0	<25.0	<25.0	<25.0
trans-1,2-Dichloroethene	1,560,000	1,850,000	62.6	--	<25.0	<25.0	<25.0	<25.0
1,2-Dichloropropane	1,330	6,620	3.3	--	<25.0	<25.0	<25.0	<25.0
1,3-Dichloropropane	1,490,000	1,490,000	--	--	<25.0	<25.0	<25.0	<25.0
2,2-Dichloropropane	191,000	191,000	--	--	<25.0	<25.0	<25.0	<25.0
1,1-Dichloropropene	--	--	--	--	<25.0	<25.0	<25.0	<25.0
cis-1,3-Dichloropropene	1,210,000	1,210,000	--	--	<25.0	<25.0	<25.0	<25.0
trans-1,3-Dichloropropene	1,510,000	1,510,000	--	--	<25.0	<25.0	<25.0	<25.0
Diisopropyl ether	2,260,000	2,260,000	--	--	<25.0	<25.0	<25.0	<25.0
Ethylbenzene	7,470	37,000	1,570	--	<25.0	<25.0	<25.0	<25.0
Fluorotrichloromethane	1,230,000	1,230,000	4,477.5	--	<25.0	<25.0	<25.0	<25.0
Hexachlorobutadiene	1,510	7,450	--	--	<25.0	<25.0	<25.0	<25.0
Isopropylbenzene	268,000	268,000	--	--	<25.0	<25.0	<25.0	<25.0
p-Isopropyltoluene	162,000	162,000	--	--	<25.0	<25.0	<25.0	<25.0
Methylene chloride	60,700	1,070,000	2.56	--	<25.0	<25.0	<25.0	<25.0
Methyl-tert-butyl-ether	59,400	293,000	27	--	<25.0	<25.0	<25.0	<25.0
Naphthalene	5,150	26,000	658.2	--	<40.0	<40.0	<40.0	<40.0
n-Propylbenzene	264,000	264,000	--	--	<25.0	<25.0	<25.0	<25.0
Styrene	867,000	867,000	220	--	<25.0	<25.0	<25.0	<25.0
1,1,2,2-Tetrachloroethane	753	3,690	0.16	--	<25.0	<25.0	<25.0	<25.0
1,1,1,2-Tetrachloroethane	2,590	12,900	53.4	--	<25.0	<25.0	<25.0	<25.0
Tetrachloroethene	30,700	153,000	4.54	--	<25.0	<25.0	<25.0	<25.0
Toluene	818,000	818,000	1,107.2	--	<25.0	<25.0	<25.0	<25.0
1,2,3-Trichlorobenzene	62,600	818,000	--	--	<25.0	<25.0	<25.0	<25.0
1,2,4-Trichlorobenzene	22,000	98,700	408	--	<47.6	<47.6	<47.6	<47.6
1,1,1-Trichloroethane	640,000	640,000	140.2	--	<25.0	<25.0	<25.0	<25.0
1,1,2-Trichloroethane	1,480	7,340	3.2	--	<25.0	<25.0	<25.0	<25.0
Trichloroethene	1,260	8,810	3.6	--	<25.0	<25.0	<25.0	<25.0
1,2,3-Trichloropropane	4.97	95.4	51.9	--	<25.0	<25.0	<25.0	<25.0
1,2,4-Trimethylbenzene <sup>1</sup>	89,800	219,000	1,382.1	--	<25.0	<25.0	<25.0	<25.0
1,3,5-Trimethylbenzene <sup>1</sup>	182,000	182,000	1,382.1	--	<25.0	<25.0	<25.0	<25.0
Vinyl chloride	67.1	2,030	0.1	--	<25.0	<25.0	<25.0	<25.0
o-Xylene	434,000	434,000	--	--	<25.0	<25.0	<25.0	<25.0
m-&p-Xylene	--	--	--	--	<50.0	<50.0	<50.0	<50.0
Xylenes, total	260,000	260,000	3,960	--	<75.0	<75.0	<75.0	<75.0
<b>PAHs (µg/kg)</b>								
Acenaphthene	3,440,000	33,000,000	--	--	<10.0	73.4 J	<9.4	12.0 J
Acenaphthylene	--	--	--	--	<9.0	<35.7	13.9 J	12.4 J
Anthracene	17,200,000	100,000,000	196,949.2	--	<19.4	185	41.1	68.9
Benzo(a)anthracene	147	2,110	--	--	18.5 J	402 A	141	208 A
Benzo(a)pyrene	14.8	211	470	--	20.7 A	412 A,B	159 A	232 A,B
Benzo(b)fluoranthene	148	2,110	479.3	--	18.7 J	594 A,C	148	343 A
Benzo(ghi)perylene	--	--	--	--	<7.7	176	56.7	92.4
Benzo(k)fluoranthene	1,480	21,100	--	--	23.9	187	178	108
Chrysene	14,800	211,000	144.6	--	25.1	453 C	187 C	262 C
Dibenzo(a,h)anthracene	14.8	211	--	--	<7.4	55.7 J A	26.0 A	31.6 A
Fluoranthene	2,290,000	22,000,000	88,877.8	--	44.3	918	309	408
Fluorene	2,290,000	22,000,000	14,829.9	--	<10.0	61.0 J	<9.4	12.5 J
Indeno(1,2,3-cd)pyrene	148	2,110	--	--	<7.6	181 A	62.8	93.2
1-Methylnaphthalene	15,600	53,100	--	--	<10.0	41.1 J	<9.4	58.5
2-Methylnaphthalene	229,000	2,200,000	--	--	<10.0	44.6 J	10.5 J	77.8
Naphthalene	5,150	26,000	658.2	--	<10.0	46.0 J	10 J	54.1
Phenanthrene	--	--	--	--	27.7	740	128	273
Pyrene	1,720,000	16,500,000	54,545.5	--	36.1	735	262	330
<b>Metals (mg/kg)</b>								
Arsenic	0.613	2.39	0.58	8	6.8 A,B,C	12.4 A,B,C,D	7.2 A,B,C	8.3 A,B,C,D
Barium	15,300	100,000	164.8	364	48.8	113	149	55.4
Cadmium	70	799	0.75	1	<0.375	1.5 C,D	1.2 C,D	0.37 J
Chromium	--	--	360,000	44	17.3	32.3	22.7	16.4
Lead	400	800	27	52	21.5	809 A,B,C,D	502 A,C,D	129 C,D
Mercury	3.13	3.13	0.21	--	0.15	0.11 J	0.18	<0.029
Selenium	391	5,110	0.52	--	<0.37	1.1 J C	1.3 J C	<0.36
Silver	391	5,110	0.85	--	<0.31	<0.32	0.47 J	0.31 J

**Notes:**

- VOCs = Volatile Organic Compounds
- PAHs = Polynuclear Aromatic Hydrocarbons
- RCL = Residual Contaminant Level
- BTV = Background Threshold Value
- µg/kg = micrograms per kilogram
- mg/kg = milligrams per kilogram
- <sup>1</sup> Groundwater Pathway RCL is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
- A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
- B Parameter exceeds NR 720 RCL for Industrial Direct Contact.
- C Parameter exceeds NR 720 RCL for Groundwater Pathway.
- D Parameter exceeds Surficial BTV for metals.
- J Estimated concentration at or above the LOD and below the LOQ.
- No RCL or Surficial BTV established.
- #N/A = Not analyzed
- Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated RCL spreadsheet dated June 2016).

Table 2: Groundwater Analytical Results  
MLK Drive Phase II ESA  
Ramboll Environ Project No. 21-39942B

Parameters	NR 140 Standards		TW-1	TW-2	TW-3	TW-4
	ES	PAL	09/08/2016	09/08/2016	09/08/2016	09/07/2016
<b>VOCs (µg/L)</b>						
Benzene	<b>5</b>	<i>0.5</i>	<0.50	<0.50	<0.50	<0.50
Bromobenzene	--	--	<0.23	<0.23	<0.23	<0.23
Bromochloromethane	--	--	<0.34	<0.34	<0.34	<0.34
Bromodichloromethane	<b>0.6</b>	<i>0.06</i>	<0.50	<0.50	<0.50	<0.50
Bromoform	<b>4.4</b>	<i>0.44</i>	<0.50	<0.50	<0.50	<0.50
Bromomethane	<b>10</b>	<i>1</i>	<2.4	<2.4	<2.4	<2.4
n-Butylbenzene	--	--	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene	--	--	<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene	--	--	<0.18	<0.18	<0.18	<0.18
Carbon tetrachloride	<b>5</b>	<i>0.5</i>	<0.50	<0.50	<0.50	<0.50
Chlorobenzene	--	--	<0.50	<0.50	<0.50	<0.50
Chloroethane	<b>400</b>	<i>80</i>	<0.37	<0.37	<0.37	<0.37
Chloroform	<b>6</b>	<i>0.6</i>	<2.5	<2.5	<2.5	<2.5
Chloromethane	<b>30</b>	<i>3</i>	<0.50	<0.50	<b>0.96</b> J	<0.50
2-Chlorotoluene	--	--	<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene	--	--	<0.21	<0.21	<0.21	<0.21
Dibromochloromethane	<b>60</b>	<i>6</i>	<0.50	<0.50	<0.50	<0.50
1,2-Dibromo-3-chloropropane	<b>0.2</b>	<i>0.02</i>	<2.2	<2.2	<2.2	<2.2
1,2-Dibromoethane	<b>0.05</b>	<i>0.005</i>	<0.18	<0.18	<0.18	<0.18
Dibromomethane	--	--	<0.43	<0.43	<0.43	<0.43
1,2-Dichlorobenzene	<b>600</b>	<i>60</i>	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	<b>600</b>	<i>120</i>	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	<b>75</b>	<i>15</i>	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	<b>1000</b>	<i>200</i>	<0.22	<0.22	<0.22	<0.22
1,1-Dichloroethane	<b>850</b>	<i>85</i>	<0.24	<0.24	<0.24	<0.24
1,2-Dichloroethane	<b>5</b>	<i>0.5</i>	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	<b>7</b>	<i>0.7</i>	<0.41	<0.41	<0.41	<0.41
cis-1,2-Dichloroethene	<b>70</b>	<i>7</i>	<0.26	<0.26	<0.26	<0.26
trans-1,2-Dichloroethene	<b>100</b>	<i>20</i>	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	<b>5</b>	<i>0.5</i>	<0.23	<0.23	<0.23	<0.23
1,3-Dichloropropane	--	--	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane	--	--	<0.48	<0.48	<0.48	<0.48
1,1-Dichloropropene	--	--	<0.44	<0.44	<0.44	<0.44
cis-1,3-Dichloropropene	<b>0.4</b>	<i>0.04</i>	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	<b>0.4</b>	<i>0.04</i>	<0.23	<0.23	<0.23	<0.23
Diisopropyl ether	--	--	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	<b>700</b>	<i>140</i>	<0.50	<0.50	<0.50	<0.50
Hexachlorobutadiene	--	--	<2.1	<2.1	<2.1	<2.1
Isopropylbenzene	--	--	<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene	--	--	<0.50	<0.50	<0.50	<0.50
Methylene chloride	<b>5</b>	<i>0.5</i>	<0.23	<0.23	<0.23	<0.23
Methyl-tert-butyl-ether	<b>60</b>	<i>12</i>	<0.17	<0.17	<0.17	<0.17
Naphthalene	<b>100</b>	<i>10</i>	<2.5	<2.5	<2.5	<2.5
n-Propylbenzene	--	--	<0.50	<0.50	<0.50	<0.50
Styrene	<b>100</b>	<i>10</i>	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	<b>70</b>	<i>7</i>	<0.18	<0.18	<0.18	<0.18
1,1,2,2-Tetrachloroethane	<b>0.2</b>	<i>0.02</i>	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	<b>5</b>	<i>0.5</i>	<0.50	<0.50	<0.50	<0.50
Toluene	<b>800</b>	<i>160</i>	<0.50	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene	--	--	<2.1	<2.1	<2.1	<2.1
1,2,4-Trichlorobenzene	<b>70</b>	<i>14</i>	<2.2	<2.2	<2.2	<2.2
1,1,1-Trichloroethane	<b>200</b>	<i>40</i>	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	<b>5</b>	<i>0.5</i>	<0.20	<0.20	<0.20	<0.20
Trichloroethene	<b>5</b>	<i>0.5</i>	<0.33	<0.33	<0.33	<0.33
Trichlorofluoromethane	<b>3490</b>	<i>698</i>	<0.18	<0.18	<0.18	<0.18
1,2,3-Trichloropropane	<b>60</b>	<i>12</i>	<0.50	<0.50	<0.50	<0.50
1,2,4-Trimethylbenzene <sup>1</sup>	<b>480</b>	<i>96</i>	<0.50	<0.50	<0.50	<0.50
1,3,5-Trimethylbenzene <sup>1</sup>	<b>480</b>	<i>96</i>	<0.50	<0.50	<0.50	<0.50
Vinyl chloride	<b>0.2</b>	<i>0.02</i>	<0.18	<0.18	<0.18	<0.18
m&p-Xylene <sup>2</sup>	<b>2,000</b>	<i>400</i>	<1.0	<1.0	<1.0	<1.0
o-Xylene <sup>2</sup>	<b>2,000</b>	<i>400</i>	<0.50	<0.50	<0.50	<0.50
Xylenes, total	<b>2,000</b>	<i>400</i>	<1.5	<1.5	<1.5	<1.5

**Notes:**

VOCs = Volatile Organic Compounds

µg/L = micrograms per Liter

<sup>1</sup> Standards are for 1,2,4- and 1,3,5-Trimethylbenzene combined.

<sup>2</sup> Standards are for Total Xylenes (-m, -p and -o).

ES = Enforcement Standard

PAL = Preventive Action Limit

**Bold value** = NR 140 ES Exceedance

*Italic value* = NR 140 PAL Exceedance

-- No NR 140 ES or PAL established.

#N/A = Not analyzed

J = Estimated concentration above the adjusted method

detection limit and below the adjusted reporting limit.

## **ATTACHMENT A**

### **Soil Boring Logs and Abandonment Forms**

# SOIL BORING LOG KEY



CRUSHED STONE



CLAYEY SILT



SAND AND GRAVEL  
FILL



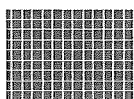
SILTY CLAY



SILTY CLAY FILL



SANDY CLAY



GRAVEL



CLAY



SAND AND GRAVEL



SILTY  
SAND/GRAVEL

SAND



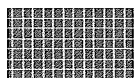
GRAVELY CLAY



CLAYEY SAND



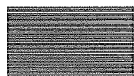
SILTY  
SAND/GRAVEL FILL



SILTY SAND



TOPSOIL



SANDY SILT



ASPHALT



SILT



CONCRETE



BEDROCK



BENTONITE CHIPS



Route To: Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name MLK Phase II ESA			License/Permit/Monitoring Number		Boring Number B-1		
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Natali Firm: CS Drilling			Date Drilling Started 09 / 07 / 2016 m m d d y y y y		Date Drilling Completed 09 / 07 / 2016 m m d d y y y y		
Drilling Method GeoProbe		Final Static Water Level ____ Feet MSL		Surface Elevation ____ Feet MSL		Borehole Diameter 2 inches	
WI Unique Well No. --	DNR Well ID No. --	Well Name --	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> or Boring Location <input type="checkbox"/> State Plane _____ N, _____ E ____ 1/4 of ____ 1/4 of Section _____, T _____ N, R _____		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E ____ Feet <input type="checkbox"/> S ____ Feet <input type="checkbox"/> W		
Facility ID		County Milwaukee		County Code 4 0		Civil Town/City/ or Village Milwaukee, Wisconsin	

Sample Number and Type	Length Alt. & Recovered (ft)	Blow Counts	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
Lab Sample 2-3'	4 1/4'		1.0	(0-0.33') Concrete	--									
			1.0	(0.33'-1') Dark brown, silty clay (fill)	--				0.0					
	4 1/4'		4.0	(1-2') Light brown, clay, trace fine gravel, slightly plastic (possible fill)	--									
			4.0	(2-5') Light brown, silt, trace fine gravel (possible fill)	--				0.0					
	4 1/4'		6.0	(5-6.5') Brown, silty clay, trace fine gravel	CL									
			6.0	(6.5-12') Brown, clay, trace fine gravel, plastic	CL				0.0					
	4 1/4'		12.0	(12-15') Dark brown, clay, trace fine gravel, moist, very plastic, graying toward terminal depth	CL									
			12.0	(15-17') Brown, silty clay, trace fine gravel, moist	CL									
4 1/4'		18.0	(17-20') Dark brown/gray, sandy clay, wet	CL										
		20.0	Temporary monitoring well TW-1 installed. Depth to water: 13.62', depth to bottom: 18'.											
			22.0											

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
 Signature *[Signature]* Firm Ramboll-Environ

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name MLK Phase II ESA			License/Permit/Monitoring Number		Boring Number B-2	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Natali Firm: CS Drilling			Date Drilling Started 09 / 07 / 2016 m m d d y y y y		Date Drilling Completed 09 / 07 / 2016 m m d d y y y y	
WI Unique Well No.		DNR Well ID No.	Well Name		Final Static Water Level Feet MSL	Surface Elevation Feet MSL
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input type="checkbox"/>		State Plane _____ N, _____ E _____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____		Lat _____ ° _____ ' _____ " Long _____ ° _____ ' _____ "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E _____ Feet <input type="checkbox"/> S _____ Feet <input type="checkbox"/> W

Facility ID		County Milwaukee	County Code 4 0	Civil Town/City/ or Village Milwaukee, Wisconsin		
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Sample Number and Type	Length Alt. & Recovered (ft)	Blow Counts	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
Lab Sample 2.3'	4 1/4'		1.5	(0-1') Sand and gravel fill (1-1.5') Brown, silty clay (fill)	--			0.0						
			4.0	(1.5-4') Brown/black, silty clay, apparent organic soil (fill) (4-4.5') Crushed concrete (fill)	--			0.0						
	4 1/4'		6.0	(4.5-6') Light brown, fine sand, dense (fill) (6-7') Brown, silty sand, trace fine gravel (possible fill)	--			0.0						
			8.0		SM			0.0						
	4 1/4'		10.0					0.0						
			12.0					0.0						
	4 1/4'		14.0	(7-20') Brown, clay, stiff, begins graying at approximately 15'	CL			0.0						
			16.0					0.0						
	4 1/4'		18.0					0.0						
			20.0					0.0						
			22.0	Temporary monitoring well TW-2 installed. Depth to water: 19.07', depth to bottom: 19.19'										

I hereby certify that the information on this form is true and correct to the best of my knowledge.  
 Signature *[Signature]* Firm Ramboll-Environ

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name MLK Phase II ESA			License/Permit/Monitoring Number		Boring Number B-3	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Natali Firm: CS Drilling			Date Drilling Started 09/07/2016 m m d d y y y y		Date Drilling Completed 09/07/2016 m m d d y y y y	
WI Unique Well No.		DNR Well ID No.	Well Name	Final Static Water Level Feet MSL		Surface Elevation Feet MSL
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> or Boring Location <input type="checkbox"/>		State Plane N, E		Lat ° ' "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E
1/4 of 1/4 of Section		T N, R		Long ° ' "		Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W

Facility ID		County Milwaukee		County Code 4 0		Civil Town/City/ or Village Milwaukee, Wisconsin	
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Sample Number and Type	Length Alt. & Recovered (ft)	Blow Counts	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
Lab Sample 1.5-2.5'	4 1/4'		0.0	(0-0.5') Topsoil	--			0.0						
			2.5	(0.5-2.5') Sand and gravel fill	--			0.0						
			4.0	(2.5-7.5') Light brown, silty sand, trace fine gravel (fill)	--			0.0						
			6.0											
			8.0	(7.5-8') Crushed rock (fill)	--					0.0				
			10.0	(8-10') Brown, sandy silt, trace fine gravel	ML					0.0				
			12.0	(10-12.5') Brown, fine to medium sand, dense, some gravel	SP					0.0				
			14.0	(12.5-15') Gray, medium sand, some gravel, loose, moist	SP					0.0				
16.0	(15-20') Brown, silty clay, trace fine gravel, moist	CL					0.0							
18.0														
			22.0	Temporary monitoring well TW-3 installed. Depth to water: 18.62', depth to bottom: 18.68'.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *[Signature]* Firm Ramboll-Environ

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where completed form should be sent.

Route To: Watershed/Wastewater  Waste Management   
 Remediation/Redevelopment  Other

Facility/Project Name MLK Phase II ESA			License/Permit/Monitoring Number	Boring Number B-4		
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Marc Last Name: Natali Firm: CS Drilling			Date Drilling Started 0 9 / 0 7 / 2 0 1 6 m m d d y y y y	Date Drilling Completed 0 9 / 0 7 / 2 0 1 6 m m d d y y y y	Drilling Method GeoProbe	
WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL	Borehole Diameter 2 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input type="checkbox"/>			Local Grid Location			
State Plane _____ N, _____ E 1/4 of _____ 1/4 of Section _____, T _____ N, R _____			Lat _____ ° _____ ' _____ "	_____ ° N _____ ° E		
			Long _____ ° _____ ' _____ "	_____ Feet □ S _____ Feet □ W		

Facility ID	County Milwaukee	County Code 4 0	Civil Town/City/ or Village Milwaukee, Wisconsin
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Sample Number and Type	Length Alt. & Recovered (ft)	Blow Counts	Depth in Feet (below ground surface)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
Lab Sample 2-3'	4 1/4'		2.0	(0-0.5') Topsoil	-			0.0						
				(0.5'-2') Sand and gravel fill, trace red brick	-			0.0						
			4.0	(2-5') Brown, silty clay, trace fine gravel (possible fill)	CL			0.0						
	4 1/4'		6.0	(5-7') Dark Brown, clay, slightly plastic (possible fill)	CL			0.0						
			8.0	(7-8') Red/brown, medium sand (possible fill)	SP			0.0						
	4 1/4'		10.0	(8-12.5') Brown, clay, trace fine gravel, moist	CL			0.0						
	4 1/4'		14.0	(12.5-17.5') Gray, sandy clay, moist	CL			0.0						
4 1/4'		18.0	(17.5-20') Gray, clay, moist, plastic	CL			0.0							
			22.0	Temporary monitoring well TW-4 installed. Depth to water: 13.70', depth to bottom: 18.47'.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *[Signature]* Firm Ramboll-Environ

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Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

**Route to:**

Drinking Water  
Waste Management

Watershed/Wastewater

Other: \_\_\_\_\_

Remediation/Redevelopment

<b>1. Well Location Information</b>					<b>2 Facility/ Owner Information</b>				
County Milwaukee		WI Unique Well # of Removed Well		Hicap #	Facility Name MLK Phase II ESA Properties				Facility ID (FID or PWS)
Latitude / Longitude (Degrees and Minutes)			Method Code (see instructions)		License/Permit/Monitoring #				Original Well Owner
° ' N		° ' W							Present Well Owner
1/4	1/4	Section	Township	Range	E	w	Mailing Address of Present Owner		
or Gov't Lot #		N	N	N	w	w	City of Present Owner		
Well Street Address 3300, 3306, 3314, and 3318 N MLK Drive					State	ZIP Code			
Well City, Village or Town Milwaukee			Well ZIP Code						
Subdivision Name			Lot #						
Reason For Removal From Service		WI Unique Well # of Replacement Well			<b>4. Pump, Liner, Screen, Casing &amp; Sealing Material</b>				
<b>3. Well / Drillhole / Borehole Information</b>					Pump and piping removed? Yes No <u>N/A</u>				
Monitoring Well Water Well <u>Borehole / Drillhole</u>		Original Construction Date (mm/dd/yyyy) 9/7/2016			Liner(s) removed? Yes No <u>N/A</u>				
Construction Type: <u>Drilled</u> Driven (Sandpoint) Dug		If a Well Construction Report is available, please attach.			Screen removed? <u>Yes</u> No N/A				
Formation Type: <u>Unconsolidated Formation</u> Bedrock					Casing left in place? Yes <u>No</u> N/A				
Total Well Depth From Ground Surface (ft.) 18.00		Casing Diameter (in.) 2			Was casing cut off below surface? Yes No <u>N/A</u>				
Lower Drillhole Diameter (in.)		Casing Depth (ft.)			Did sealing material rise to surface? <u>Yes</u> No N/A				
Was well annular space grouted? Yes No Unknown					Did material settle after 24 hours? Yes <u>No</u> N/A				
If yes, to what depth (feet)?		Depth to Water (feet) 13.62			If yes, was hole retopped? Yes No <u>N/A</u>				
					If bentonite chips were used, were they hydrated with water from a known safe source? Yes No <u>N/A</u>				
<b>5. Material Used To Fill Well / Drillhole</b>					Required Method of Placing Sealing Material				
Concrete		Bentonite Chips			<u>Conductor Pipe-Gravity</u> Conductor Pipe-Pumped				
From (ft.)		To (ft.)		Screened & Poured Other (Explain):					
Surface		0.33		(Bentonite Chips)					
Bentonite Chips		0.33 18.00		Sealing Materials					
				Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.)					
				Sand-Cement (Concrete) Grout Bentonite-Sand Slurry "					
				Concrete Bentonite Chips					
				For Monitoring Wells and Monitoring Well Boreholes Only:					
				<u>Bentonite Chips</u> Bentonite - Cement Grout					
				Granular Bentonite Bentonite - Sand Slurry					
				No. Yards, Sacks, Sealant or Volume (Circle one)					
				Mix Ratio or Mud Weight					

**6. Comments**

B-1 / TW-1

<b>7. Supervision of Work</b>					<b>DNR Use Only</b>	
Name of Person or Firm Doing Filling & Sealing Ramboll Environ		License #	Date of Filling & Sealing (mm/dd/yyyy) 9/8/2016		Date Received	Noted By
Street or Route 175 N Corporate Dr, Suite 160			Telephone Number (262) 901-3505		Comments	
City Brookfield		State WI	ZIP Code 53045	Signature of Person Doing Work <i>[Signature]</i>		Date Signed 9/26/2016

**Well / Drillhole / Borehole Filling & Sealing**

Form 3300-005 (R 4/08)

Page 1 of 2

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to: Drinking Water, Waste Management, Watershed/Wastewater, Remediation/Redevelopment, Other:

<b>1. Well Location Information</b>				<b>2. Facility/ Owner Information</b>			
County Milwaukee		WI Unique Well # of Removed Well		Hicap #		Facility Name MLK Phase II ESA Properties	
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)		Facility ID (FID or PWS)		License/Permit/Monitoring #	
1/4/1/4 1/4		Section		Township		Range	
or Gov't Lot #		N		E		w	
Well Street Address 3300, 3306, 3314, and 3318 N MLK Drive				Original Well Owner			
Well City, Village or Town Milwaukee				Present Well Owner			
Subdivision Name				Well ZIP Code			
Reason For Removal From Service				WI Unique Well # of Replacement Well			
Subdivision Name				Lot #			
Mailing Address of Present Owner				City of Present Owner			
State				ZIP Code			

<b>3. Well / Drillhole / Borehole Information</b>				<b>4. Pump, Liner, Screen, Casing &amp; Sealing Material</b>			
Monitoring Well		Original Construction Date (mm/dd/yyyy)		Pump and piping removed?		Yes No (N/A)	
Water Well		9/7/2016		Liner(s) removed?		Yes No (N/A)	
Borehole / Drillhole		If a Well Construction Report is available, please attach.		Screen removed?		Yes (Yes) No (No) N/A	
Construction Type:		Dug		Casing left in place?		Yes (Yes) No (No) N/A	
Drilled		Driven (Sandpoint)		Was casing cut off below surface?		Yes No (N/A)	
Other (specify):				Did sealing material rise to surface?		Yes (Yes) No (No) N/A	
				Did material settle after 24 hours?		Yes (Yes) No (No) N/A	
				If yes, was hole retopped?		Yes No (N/A)	
				If bentonite chips were used, were they hydrated with water from a known safe source?		Yes No (N/A)	

Formation Type:				Required Method of Placing Sealing Material			
Unconsolidated Formation		Bedrock		Conductor Pipe-Gravity		Conductor Pipe-Pumped	
Total Well Depth From Ground Surface (ft.)		Casing Diameter (in.)		Screened & Poured		Other (Explain):	
19.19		2		(Bentonite Chips)			
Lower Drillhole Diameter (in.)		Casing Depth (ft.)		Sealing Materials			
				Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.)			
Was well annular space grouted?		Yes No Unknown		Sand-Cement (Concrete) Grout Bentonite-Sand Slurry "			
If yes, to what depth (feet)?		Depth to Water (feet)		Concrete Bentonite Chips			
		19.07		For Monitoring Wells and Monitoring Well Boreholes Only:			
				Bentonite Chips Bentonite - Cement Grout			
				Granular Bentonite Bentonite - Sand Slurry			

<b>5. Material Used To Fill Well / Drillhole</b>				<b>From (ft.)</b>	<b>To (ft.)</b>	<b>No. Yards, (Sacks Sealant or Volume (circle one))</b>	<b>Mix Ratio or Mud Weight</b>
Bentonite chips				Surface	19.19	0.61	

**6. Comments**  
 B-2/TW-2

<b>7. Supervision of Work</b>				<b>DNR Use Only</b>	
Name of Person or Firm Doing Filling & Sealing		License #		Date Received	
Ramboll Environ				Noted By	
Date of Filling & Sealing (mm/dd/yyyy)		Telephone Number		Comments	
9/8/2016		(262) 901-3505			
Street or Route		State		Signature of Person Doing Work	
175 N Corporate Dr, Suite 160		WI		Date Signed	
City		ZIP Code		9/26/2016	
Brookfield		53045			

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to: Drinking Water Watershed/Wastewater Remediation/Redevelopment  
Waste Management Other:

1. Well Location Information					2 Facility/ Owner Information		
County Milwaukee		WI Unique Well # of Removed Well		Hicap #	Facility Name MLK Phase II ESA Properties		
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)			Facility ID (FID or PWS)		
_____ ° _____ ' N _____ ° _____ ' W					License/Permit/Monitoring #		
¼/¼	¼	Section	Township	Range	Original Well Owner		
or Gov't Lot #			N	E w	Present Well Owner		
Well Street Address 3300, 3306, 3314, and 3318 N MLK Drive							
Well City, Village or Town Milwaukee				Well ZIP Code			
Subdivision Name				Lot #		Mailing Address of Present Owner	
Reason For Removal From Service				WI Unique Well # of Replacement Well		City of Present Owner	
						State	
						ZIP Code	

3. Well / Drillhole / Borehole Information				4. Pump, Liner, Screen, Casing & Sealing Material			
Monitoring Well Water Well <u>Borehole / Drillhole</u>		Original Construction Date (mm/dd/yyyy) 9/7/2016		Pump and piping removed?		Yes No <u>N/A</u>	
Construction Type: <u>Drilled</u> Driven (Sandpoint) Dug		If a Well Construction Report is available, please attach.		Liner(s) removed?		Yes No <u>N/A</u>	
Other (specify):				Screen removed?		<u>Yes</u> No N/A	
Formation Type: <u>Unconsolidated Formation</u> Bedrock				Casing left in place?		Yes <u>No</u> N/A	
Total Well Depth From Ground Surface (ft.) 18.68		Casing Diameter (in.) 2		Was casing cut off below surface?		Yes No <u>N/A</u>	
Lower Drillhole Diameter (in.)		Casing Depth (ft.)		Did sealing material rise to surface?		<u>Yes</u> No N/A	
Was well annular space grouted? Yes No Unknown				Did material settle after 24 hours?		Yes <u>No</u> N/A	
If yes, to what depth (feet)?		Depth to Water (feet) 18.62		If yes, was hole retopped? If bentonite chips were used, were they hydrated with water from a known safe source?		Yes No <u>N/A</u>	
				Required Method of Placing Sealing Material			
				<u>Conductor Pipe-Gravity</u> Conductor Pipe-Pumped			
				Screened & Poured Other (Explain):			
				(Bentonite Chips)			
				Sealing Materials			
				Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.)			
				Sand-Cement (Concrete) Grout Bentonite-Sand Slurry"			
				Concrete Bentonite Chips			
				For Monitoring Wells and Monitoring Well Boreholes Only:			
				<u>Bentonite Chips</u> Bentonite - Cement Grout			
				Granular Bentonite Bentonite - Sand Slurry			

5. Material Used To Fill Well / Drillhole				From (ft.)	To (ft.)	No. Yards, Sacks, Sealant or Volume (Circle one)	Mix Ratio or Mud Weight
Bentonite chips				Surface	18.68	0.60	

**6. Comments**  
B-3 / TW-3

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing Ramboll Environ		License #	Date of Filling & Sealing (mm/dd/yyyy) 9/8/2016	Date Received	Noted By
Street or Route 175 N Corporate Dr, Suite 160			Telephone Number (262) 901-3505	Comments	
City Brookfield	State WI	ZIP Code 53045	Signature of Person Doing Work 	Date Signed 9/26/2016	

### Well / Drillhole / Borehole Filling & Sealing

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

<input type="checkbox"/> <b>Verification Only of Fill and Seal</b>	<b>Route to:</b>		
	Drinking Water Waste Management	Watershed/Wastewater Other: _____	Remediation/Redevelopment

<b>1. Well Location Information</b>	<b>2. Facility/ Owner Information</b>
County: <u>Milwaukee</u> WI Unique Well # of Removed Well: _____ Hicap #: _____ Latitude / Longitude (Degrees and Minutes): _____ ' N _____ ' W Method Code (see instructions): _____ 1/4/1/4      1/4      Section      Township      Range      E or Gov't Lot #      N      w Well Street Address: <u>3300, 3306, 3314, and 3318 N MLK Drive</u> Well City, Village or Town: <u>Milwaukee</u> Well ZIP Code: _____ Subdivision Name: _____      Lot #: _____	Facility Name: <u>MLK Phase II ESA Properties</u> Facility ID (FID or PWS): _____ License/Permit/Monitoring #: _____ Original Well Owner: _____ Present Well Owner: _____ Mailing Address of Present Owner: _____ City of Present Owner: _____      State: _____      ZIP Code: _____

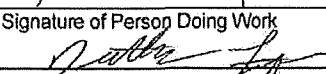
Reason For Removal From Service	WI Unique Well # of Replacement Well	<b>4. Pump, Liner, Screen, Casing &amp; Sealing Material</b>
---------------------------------	--------------------------------------	--

<b>3. Well / Drillhole / Borehole Information</b>	Pump and piping removed?      Yes      No      (N/A) Liner(s) removed?      Yes      No      (N/A) Screen removed?      (Yes)      No      N/A Casing left in place?      Yes      (No)      N/A
Monitoring Well: _____ Water Well: _____ (Borehole / Drillhole) Construction Type: _____ (Drilled)      Driven (Sandpoint)      Dug Other (specify): _____	Original Construction Date (mm/dd/yyyy): <u>9/7/2016</u> If a Well Construction Report is available, please attach. Was casing cut off below surface?      Yes      No      (N/A) Did sealing material rise to surface?      (Yes)      No      N/A Did material settle after 24 hours?      Yes      (No)      N/A If yes, was hole retopped?      Yes      No      (N/A) If bentonite chips were used, were they hydrated with water from a known safe source?      Yes      No      (N/A)

Formation Type: _____ (Unconsolidated Formation)      Bedrock	Required Method of Placing Sealing Material: (Conductor Pipe-Gravity)      Conductor Pipe-Pumped Screened & Poured      Other (Explain): _____ (Bentonite Chips)
Total Well Depth From Ground Surface (ft.): <u>18.47</u> Lower Drillhole Diameter (in.): _____ Casing Diameter (in.): <u>2</u> Casing Depth (ft.): _____ Was well annular space grouted?      Yes      No      Unknown If yes, to what depth (feet)?      Depth to Water (feet): <u>13.70</u>	Sealing Materials: Neat Cement Grout      Clay-Sand Slurry (11 lb./gal. wt.) Sand-Cement (Concrete) Grout      Bentonite-Sand Slurry " Concrete      Bentonite Chips For Monitoring Wells and Monitoring Well Boreholes Only: (Bentonite Chips)      Bentonite - Cement Grout Granular Bentonite      Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole			
From (ft.)	To (ft.)	No. Yards, Bags, Sealant or Volume (circle one)	Mix Ratio or Mud Weight
	Surface	<u>18.47</u> <u>0.59</u>	

**6. Comments**  
B-4/TW-4

<b>7. Supervision of Work</b>				<b>DNR Use Only</b>	
Name of Person or Firm Doing Filling & Sealing <u>Ramboll Environ</u>	License #	Date of Filling & Sealing (mm/dd/yyyy) <u>9/8/2016</u>	Date Received	Noted By	
Street or Route <u>175 N Corporate Dr, Suite 160</u>			Telephone Number <u>(262) 901-3505</u>		Comments
City <u>Brookfield</u>	State <u>WI</u>	ZIP Code <u>53045</u>	Signature of Person Doing Work 		Date Signed <u>9/26/2016</u>



## **ATTACHMENT B**

### **Laboratory Analytical Reports**



Pace Analytical Services, Inc.  
1241 Bellevue Street - Suite 9  
Green Bay, WI 54302  
(920)469-2436

September 19, 2016

Jeanne Tarvin  
Ramboll Environ  
175 North Corporate Drive  
Suite 160  
Brookfield, WI 53045

RE: Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Dear Jeanne Tarvin:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Steven Mleczko  
steve.mleczko@pacelabs.com  
Project Manager

Enclosures

cc: Jon Fuqua, Ramboll Environ  
Jim Hutchens, Ramboll Environ  
Jim Kane, Ramboll Environ  
Snejana Karakis, Environ  
David L. Markelz, Ramboll Environ  
Michelle Murphy, Environ  
Abigail M. Wedig, Environ International Corp



## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..



Pace Analytical Services, Inc.  
1241 Bellevue Street - Suite 9  
Green Bay, WI 54302  
(920)469-2436

## CERTIFICATIONS

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
Virginia VELAP ID: 460263  
North Dakota Certification #: R-150

South Carolina Certification #: 83006001  
Texas Certification #: T104704529-14-1  
US Dept of Agriculture #: S-76505  
Virginia VELAP Certification ID: 460263  
Virginia VELAP ID: 460263  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40137972001	B-1 (2-3')	Solid	09/07/16 10:15	09/09/16 10:00
40137972002	B-4 (2-3')	Solid	09/07/16 10:55	09/09/16 10:00
40137972003	B-2 (2-3')	Solid	09/07/16 11:30	09/09/16 10:00
40137972004	B-3 (1.5-2.5')	Solid	09/07/16 12:00	09/09/16 10:00
40137972005	TW-4	Water	09/07/16 13:45	09/09/16 10:00
40137972006	TW-1	Water	09/08/16 10:00	09/09/16 10:00
40137972007	TW-2	Water	09/08/16 10:45	09/09/16 10:00
40137972008	TW-3	Water	09/08/16 11:10	09/09/16 10:00
40137972009	METHANOL TRIP BLANK	Solid	09/08/16 00:00	09/09/16 10:00
40137972010	TRIP BLANK	Water	09/08/16 00:00	09/09/16 10:00

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40137972001	B-1 (2-3')	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40137972002	B-4 (2-3')	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40137972003	B-2 (2-3')	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40137972004	B-3 (1.5-2.5')	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	65	PASI-G
		ASTM D2974-87	TEL	1	PASI-G
40137972005	TW-4	EPA 8260	HNW	65	PASI-G
40137972006	TW-1	EPA 8260	HNW	65	PASI-G
40137972007	TW-2	EPA 8260	HNW	65	PASI-G
40137972008	TW-3	EPA 8260	HNW	65	PASI-G
40137972009	METHANOL TRIP BLANK	EPA 8260	SMT	65	PASI-G
40137972010	TRIP BLANK	EPA 8260	HNW	65	PASI-G

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**SUMMARY OF DETECTION**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40137972001</b>	<b>B-1 (2-3')</b>					
EPA 6010	Arsenic	6.8	mg/kg	2.3	09/13/16 18:27	
EPA 6010	Barium	48.8	mg/kg	0.56	09/13/16 18:27	
EPA 6010	Chromium	17.3	mg/kg	1.1	09/13/16 18:27	
EPA 6010	Lead	21.5	mg/kg	1.4	09/13/16 18:27	
EPA 7471	Mercury	0.15	mg/kg	0.13	09/16/16 11:58	
EPA 8270 by SIM	Benzo(a)anthracene	18.5J	ug/kg	20.1	09/13/16 17:51	
EPA 8270 by SIM	Benzo(a)pyrene	20.7	ug/kg	20.1	09/13/16 17:51	
EPA 8270 by SIM	Benzo(b)fluoranthene	18.7J	ug/kg	20.1	09/13/16 17:51	
EPA 8270 by SIM	Benzo(k)fluoranthene	23.9	ug/kg	20.1	09/13/16 17:51	
EPA 8270 by SIM	Chrysene	25.1	ug/kg	20.1	09/13/16 17:51	
EPA 8270 by SIM	Fluoranthene	44.3	ug/kg	20.1	09/13/16 17:51	
EPA 8270 by SIM	Phenanthrene	27.7	ug/kg	20.1	09/13/16 17:51	
EPA 8270 by SIM	Pyrene	36.1	ug/kg	20.1	09/13/16 17:51	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	09/12/16 10:48	
<b>40137972002</b>	<b>B-4 (2-3')</b>					
EPA 6010	Arsenic	8.3	mg/kg	2.2	09/13/16 18:29	
EPA 6010	Barium	55.4	mg/kg	0.55	09/13/16 18:29	
EPA 6010	Cadmium	0.37J	mg/kg	0.55	09/13/16 18:29	
EPA 6010	Chromium	16.4	mg/kg	1.1	09/13/16 18:29	
EPA 6010	Lead	129	mg/kg	1.3	09/13/16 18:29	
EPA 6010	Silver	0.31J	mg/kg	1.1	09/13/16 18:29	
EPA 8270 by SIM	Acenaphthene	12.0J	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Acenaphthylene	12.4J	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Anthracene	68.9	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Benzo(a)anthracene	208	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Benzo(a)pyrene	232	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Benzo(b)fluoranthene	343	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Benzo(g,h,i)perylene	92.4	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Benzo(k)fluoranthene	108	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Chrysene	262	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Dibenz(a,h)anthracene	31.6	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Fluoranthene	408	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Fluorene	12.5J	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	93.2	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	1-Methylnaphthalene	58.5	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	2-Methylnaphthalene	77.8	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Naphthalene	54.1	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Phenanthrene	273	ug/kg	18.7	09/14/16 19:36	
EPA 8270 by SIM	Pyrene	330	ug/kg	18.7	09/14/16 19:36	
ASTM D2974-87	Percent Moisture	10.9	%	0.10	09/12/16 10:48	
<b>40137972003</b>	<b>B-2 (2-3')</b>					
EPA 6010	Arsenic	12.4	mg/kg	2.3	09/13/16 18:32	
EPA 6010	Barium	113	mg/kg	0.57	09/13/16 18:32	
EPA 6010	Cadmium	1.5	mg/kg	0.57	09/13/16 18:32	
EPA 6010	Chromium	32.3	mg/kg	1.1	09/13/16 18:32	
EPA 6010	Lead	809	mg/kg	1.4	09/13/16 18:32	

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### SUMMARY OF DETECTION

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40137972003</b>	<b>B-2 (2-3')</b>					
EPA 6010	Selenium	1.1J	mg/kg	2.3	09/13/16 18:32	
EPA 7471	Mercury	0.11J	mg/kg	0.15	09/16/16 12:03	
EPA 8270 by SIM	Acenaphthene	73.4J	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Anthracene	185	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Benzo(a)anthracene	402	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Benzo(a)pyrene	412	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Benzo(b)fluoranthene	594	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Benzo(g,h,i)perylene	176	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Benzo(k)fluoranthene	187	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Chrysene	453	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Dibenz(a,h)anthracene	55.7J	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Fluoranthene	918	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Fluorene	61.0J	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	181	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	1-Methylnaphthalene	41.1J	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	2-Methylnaphthalene	44.6J	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Naphthalene	46.0J	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Phenanthrene	740	ug/kg	79.7	09/14/16 18:45	
EPA 8270 by SIM	Pyrene	735	ug/kg	79.7	09/14/16 18:45	
ASTM D2974-87	Percent Moisture	16.4	%	0.10	09/12/16 10:48	
<b>40137972004</b>	<b>B-3 (1.5-2.5')</b>					
EPA 6010	Arsenic	7.2	mg/kg	2.3	09/13/16 18:34	
EPA 6010	Barium	149	mg/kg	0.57	09/13/16 18:34	
EPA 6010	Cadmium	1.2	mg/kg	0.57	09/13/16 18:34	
EPA 6010	Chromium	22.7	mg/kg	1.1	09/13/16 18:34	
EPA 6010	Lead	502	mg/kg	1.4	09/13/16 18:34	
EPA 6010	Selenium	1.3J	mg/kg	2.3	09/13/16 18:34	
EPA 6010	Silver	0.47J	mg/kg	1.1	09/13/16 18:34	
EPA 7471	Mercury	0.18	mg/kg	0.13	09/16/16 12:05	
EPA 8270 by SIM	Acenaphthylene	13.9J	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Anthracene	41.1	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Benzo(a)anthracene	141	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Benzo(a)pyrene	159	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Benzo(b)fluoranthene	148	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Benzo(g,h,i)perylene	56.7	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Benzo(k)fluoranthene	178	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Chrysene	187	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Dibenz(a,h)anthracene	26.0	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Fluoranthene	309	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	62.8	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	2-Methylnaphthalene	10.5J	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Naphthalene	10J	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Phenanthrene	128	ug/kg	18.9	09/13/16 18:08	
EPA 8270 by SIM	Pyrene	262	ug/kg	18.9	09/13/16 18:08	
ASTM D2974-87	Percent Moisture	11.7	%	0.10	09/12/16 10:48	

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### SUMMARY OF DETECTION

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40137972008 EPA 8260	TW-3 Chloromethane	0.96J	ug/L	1.0	09/12/16 21:12	

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-1 (2-3') Lab ID: 40137972001 Collected: 09/07/16 10:15 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	6.8	mg/kg	2.3	0.72	1	09/13/16 08:28	09/13/16 18:27	7440-38-2	
Barium	48.8	mg/kg	0.56	0.13	1	09/13/16 08:28	09/13/16 18:27	7440-39-3	
Cadmium	<0.075	mg/kg	0.56	0.075	1	09/13/16 08:28	09/13/16 18:27	7440-43-9	
Chromium	17.3	mg/kg	1.1	0.22	1	09/13/16 08:28	09/13/16 18:27	7440-47-3	
Lead	21.5	mg/kg	1.4	0.49	1	09/13/16 08:28	09/13/16 18:27	7439-92-1	
Selenium	<0.87	mg/kg	2.3	0.87	1	09/13/16 08:28	09/13/16 18:27	7782-49-2	
Silver	<0.31	mg/kg	1.1	0.31	1	09/13/16 08:28	09/13/16 18:27	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.15	mg/kg	0.13	0.039	1	09/16/16 07:29	09/16/16 11:58	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<10.0	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	83-32-9	
Acenaphthylene	<9.0	ug/kg	20.1	9.0	1	09/13/16 09:07	09/13/16 17:51	208-96-8	
Anthracene	<10.4	ug/kg	20.1	10.4	1	09/13/16 09:07	09/13/16 17:51	120-12-7	
Benzo(a)anthracene	18.5J	ug/kg	20.1	7.0	1	09/13/16 09:07	09/13/16 17:51	56-55-3	
Benzo(a)pyrene	20.7	ug/kg	20.1	7.2	1	09/13/16 09:07	09/13/16 17:51	50-32-8	
Benzo(b)fluoranthene	18.7J	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	205-99-2	
Benzo(g,h,i)perylene	<7.7	ug/kg	20.1	7.7	1	09/13/16 09:07	09/13/16 17:51	191-24-2	
Benzo(k)fluoranthene	23.9	ug/kg	20.1	11.1	1	09/13/16 09:07	09/13/16 17:51	207-08-9	
Chrysene	25.1	ug/kg	20.1	9.3	1	09/13/16 09:07	09/13/16 17:51	218-01-9	
Dibenz(a,h)anthracene	<7.4	ug/kg	20.1	7.4	1	09/13/16 09:07	09/13/16 17:51	53-70-3	
Fluoranthene	44.3	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	206-44-0	
Fluorene	<10.0	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	86-73-7	
Indeno(1,2,3-cd)pyrene	<7.6	ug/kg	20.1	7.6	1	09/13/16 09:07	09/13/16 17:51	193-39-5	
1-Methylnaphthalene	<10.0	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	90-12-0	
2-Methylnaphthalene	<10.0	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	91-57-6	
Naphthalene	<10.0	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	91-20-3	
Phenanthrene	27.7	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	85-01-8	
Pyrene	36.1	ug/kg	20.1	10.0	1	09/13/16 09:07	09/13/16 17:51	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	47	%	26-130		1	09/13/16 09:07	09/13/16 17:51	321-60-8	
Terphenyl-d14 (S)	64	%	10-130		1	09/13/16 09:07	09/13/16 17:51	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	09/12/16 07:30	09/12/16 16:59	120-82-1	W

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-1 (2-3') Lab ID: 40137972001 Collected: 09/07/16 10:15 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	09/12/16 07:30	09/12/16 16:59	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	09/12/16 07:30	09/12/16 16:59	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	09/12/16 07:30	09/12/16 16:59	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	09/12/16 07:30	09/12/16 16:59	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	09/12/16 07:30	09/12/16 16:59	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	09/12/16 07:30	09/12/16 16:59	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	09/12/16 07:30	09/12/16 16:59	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	104-51-8	W

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-1 (2-3') Lab ID: 40137972001 Collected: 09/07/16 10:15 Received: 09/09/16 10:00 Matrix: Solid  
 Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 16:59	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	93	%	53-165		1	09/12/16 07:30	09/12/16 16:59	1868-53-7	
Toluene-d8 (S)	88	%	54-163		1	09/12/16 07:30	09/12/16 16:59	2037-26-5	
4-Bromofluorobenzene (S)	81	%	48-138		1	09/12/16 07:30	09/12/16 16:59	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87							
Percent Moisture	17.0	%	0.10	0.10	1		09/12/16 10:48		

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-4 (2-3') Lab ID: 40137972002 Collected: 09/07/16 10:55 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	8.3	mg/kg	2.2	0.71	1	09/13/16 08:28	09/13/16 18:29	7440-38-2	
Barium	55.4	mg/kg	0.55	0.13	1	09/13/16 08:28	09/13/16 18:29	7440-39-3	
Cadmium	0.37J	mg/kg	0.55	0.073	1	09/13/16 08:28	09/13/16 18:29	7440-43-9	
Chromium	16.4	mg/kg	1.1	0.22	1	09/13/16 08:28	09/13/16 18:29	7440-47-3	
Lead	129	mg/kg	1.3	0.48	1	09/13/16 08:28	09/13/16 18:29	7439-92-1	
Selenium	<0.86	mg/kg	2.2	0.86	1	09/13/16 08:28	09/13/16 18:29	7782-49-2	
Silver	0.31J	mg/kg	1.1	0.31	1	09/13/16 08:28	09/13/16 18:29	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.039	mg/kg	0.13	0.039	1	09/16/16 07:29	09/16/16 12:00	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	12.0J	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	83-32-9	
Acenaphthylene	12.4J	ug/kg	18.7	8.4	1	09/13/16 09:07	09/14/16 19:36	208-96-8	
Anthracene	68.9	ug/kg	18.7	9.7	1	09/13/16 09:07	09/14/16 19:36	120-12-7	
Benzo(a)anthracene	208	ug/kg	18.7	6.5	1	09/13/16 09:07	09/14/16 19:36	56-55-3	
Benzo(a)pyrene	232	ug/kg	18.7	6.7	1	09/13/16 09:07	09/14/16 19:36	50-32-8	
Benzo(b)fluoranthene	343	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	205-99-2	
Benzo(g,h,i)perylene	92.4	ug/kg	18.7	7.1	1	09/13/16 09:07	09/14/16 19:36	191-24-2	
Benzo(k)fluoranthene	108	ug/kg	18.7	10.4	1	09/13/16 09:07	09/14/16 19:36	207-08-9	
Chrysene	262	ug/kg	18.7	8.7	1	09/13/16 09:07	09/14/16 19:36	218-01-9	
Dibenz(a,h)anthracene	31.6	ug/kg	18.7	6.9	1	09/13/16 09:07	09/14/16 19:36	53-70-3	
Fluoranthene	408	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	206-44-0	
Fluorene	12.5J	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	86-73-7	
Indeno(1,2,3-cd)pyrene	93.2	ug/kg	18.7	7.1	1	09/13/16 09:07	09/14/16 19:36	193-39-5	
1-Methylnaphthalene	58.5	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	90-12-0	
2-Methylnaphthalene	77.8	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	91-57-6	
Naphthalene	54.1	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	91-20-3	
Phenanthrene	273	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	85-01-8	
Pyrene	330	ug/kg	18.7	9.4	1	09/13/16 09:07	09/14/16 19:36	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	69	%	26-130		1	09/13/16 09:07	09/14/16 19:36	321-60-8	
Terphenyl-d14 (S)	71	%	10-130		1	09/13/16 09:07	09/14/16 19:36	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	09/12/16 07:30	09/12/16 17:22	120-82-1	W

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Sample: B-4 (2-3') Lab ID: 40137972002 Collected: 09/07/16 10:55 Received: 09/09/16 10:00 Matrix: Solid  
Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	09/12/16 07:30	09/12/16 17:22	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	09/12/16 07:30	09/12/16 17:22	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	09/12/16 07:30	09/12/16 17:22	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	09/12/16 07:30	09/12/16 17:22	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	09/12/16 07:30	09/12/16 17:22	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	09/12/16 07:30	09/12/16 17:22	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	09/12/16 07:30	09/12/16 17:22	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	104-51-8	W

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-4 (2-3') Lab ID: 40137972002 Collected: 09/07/16 10:55 Received: 09/09/16 10:00 Matrix: Solid  
 Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:22	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	98	%	53-165		1	09/12/16 07:30	09/12/16 17:22	1868-53-7	
Toluene-d8 (S)	95	%	54-163		1	09/12/16 07:30	09/12/16 17:22	2037-26-5	
4-Bromofluorobenzene (S)	84	%	48-138		1	09/12/16 07:30	09/12/16 17:22	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87							
Percent Moisture	10.9	%	0.10	0.10	1		09/12/16 10:48		

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-2 (2-3') Lab ID: 40137972003 Collected: 09/07/16 11:30 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	12.4	mg/kg	2.3	0.72	1	09/13/16 08:28	09/13/16 18:32	7440-38-2	
Barium	113	mg/kg	0.57	0.14	1	09/13/16 08:28	09/13/16 18:32	7440-39-3	
Cadmium	1.5	mg/kg	0.57	0.075	1	09/13/16 08:28	09/13/16 18:32	7440-43-9	
Chromium	32.3	mg/kg	1.1	0.22	1	09/13/16 08:28	09/13/16 18:32	7440-47-3	
Lead	809	mg/kg	1.4	0.49	1	09/13/16 08:28	09/13/16 18:32	7439-92-1	
Selenium	1.1J	mg/kg	2.3	0.88	1	09/13/16 08:28	09/13/16 18:32	7782-49-2	
Silver	<0.32	mg/kg	1.1	0.32	1	09/13/16 08:28	09/13/16 18:32	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.11J	mg/kg	0.15	0.043	1	09/16/16 07:29	09/16/16 12:03	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	73.4J	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	83-32-9	
Acenaphthylene	<35.7	ug/kg	79.7	35.7	4	09/13/16 09:07	09/14/16 18:45	208-96-8	
Anthracene	185	ug/kg	79.7	41.3	4	09/13/16 09:07	09/14/16 18:45	120-12-7	
Benzo(a)anthracene	402	ug/kg	79.7	27.6	4	09/13/16 09:07	09/14/16 18:45	56-55-3	
Benzo(a)pyrene	412	ug/kg	79.7	28.5	4	09/13/16 09:07	09/14/16 18:45	50-32-8	
Benzo(b)fluoranthene	594	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	205-99-2	
Benzo(g,h,i)perylene	176	ug/kg	79.7	30.4	4	09/13/16 09:07	09/14/16 18:45	191-24-2	
Benzo(k)fluoranthene	187	ug/kg	79.7	44.1	4	09/13/16 09:07	09/14/16 18:45	207-08-9	
Chrysene	453	ug/kg	79.7	36.9	4	09/13/16 09:07	09/14/16 18:45	218-01-9	
Dibenz(a,h)anthracene	55.7J	ug/kg	79.7	29.2	4	09/13/16 09:07	09/14/16 18:45	53-70-3	
Fluoranthene	918	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	206-44-0	
Fluorene	61.0J	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	86-73-7	
Indeno(1,2,3-cd)pyrene	181	ug/kg	79.7	30.3	4	09/13/16 09:07	09/14/16 18:45	193-39-5	
1-Methylnaphthalene	41.1J	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	90-12-0	
2-Methylnaphthalene	44.6J	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	91-57-6	
Naphthalene	46.0J	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	91-20-3	
Phenanthrene	740	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	85-01-8	
Pyrene	735	ug/kg	79.7	39.9	4	09/13/16 09:07	09/14/16 18:45	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	55	%	26-130		4	09/13/16 09:07	09/14/16 18:45	321-60-8	
Terphenyl-d14 (S)	60	%	10-130		4	09/13/16 09:07	09/14/16 18:45	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	09/12/16 07:30	09/12/16 17:45	120-82-1	W

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-2 (2-3') Lab ID: 40137972003 Collected: 09/07/16 11:30 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	09/12/16 07:30	09/12/16 17:45	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	09/12/16 07:30	09/12/16 17:45	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	09/12/16 07:30	09/12/16 17:45	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	09/12/16 07:30	09/12/16 17:45	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	09/12/16 07:30	09/12/16 17:45	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	09/12/16 07:30	09/12/16 17:45	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	09/12/16 07:30	09/12/16 17:45	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	104-51-8	W

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-2 (2-3') Lab ID: 40137972003 Collected: 09/07/16 11:30 Received: 09/09/16 10:00 Matrix: Solid  
 Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 17:45	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	112	%	53-165		1	09/12/16 07:30	09/12/16 17:45	1868-53-7	
Toluene-d8 (S)	110	%	54-163		1	09/12/16 07:30	09/12/16 17:45	2037-26-5	
4-Bromofluorobenzene (S)	97	%	48-138		1	09/12/16 07:30	09/12/16 17:45	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87							
Percent Moisture	16.4	%	0.10	0.10	1		09/12/16 10:48		

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-3 (1.5-2.5') Lab ID: 40137972004 Collected: 09/07/16 12:00 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b> Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	7.2	mg/kg	2.3	0.72	1	09/13/16 08:28	09/13/16 18:34	7440-38-2	
Barium	149	mg/kg	0.57	0.13	1	09/13/16 08:28	09/13/16 18:34	7440-39-3	
Cadmium	1.2	mg/kg	0.57	0.075	1	09/13/16 08:28	09/13/16 18:34	7440-43-9	
Chromium	22.7	mg/kg	1.1	0.22	1	09/13/16 08:28	09/13/16 18:34	7440-47-3	
Lead	502	mg/kg	1.4	0.49	1	09/13/16 08:28	09/13/16 18:34	7439-92-1	
Selenium	1.3J	mg/kg	2.3	0.87	1	09/13/16 08:28	09/13/16 18:34	7782-49-2	
Silver	0.47J	mg/kg	1.1	0.31	1	09/13/16 08:28	09/13/16 18:34	7440-22-4	
<b>7471 Mercury</b> Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	0.18	mg/kg	0.13	0.038	1	09/16/16 07:29	09/16/16 12:05	7439-97-6	
<b>8270 MSSV PAH by SIM</b> Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<9.4	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	83-32-9	
Acenaphthylene	13.9J	ug/kg	18.9	8.4	1	09/13/16 09:07	09/13/16 18:08	208-96-8	
Anthracene	41.1	ug/kg	18.9	9.8	1	09/13/16 09:07	09/13/16 18:08	120-12-7	
Benzo(a)anthracene	141	ug/kg	18.9	6.5	1	09/13/16 09:07	09/13/16 18:08	56-55-3	
Benzo(a)pyrene	159	ug/kg	18.9	6.7	1	09/13/16 09:07	09/13/16 18:08	50-32-8	
Benzo(b)fluoranthene	148	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	205-99-2	
Benzo(g,h,i)perylene	56.7	ug/kg	18.9	7.2	1	09/13/16 09:07	09/13/16 18:08	191-24-2	
Benzo(k)fluoranthene	178	ug/kg	18.9	10.4	1	09/13/16 09:07	09/13/16 18:08	207-08-9	
Chrysene	187	ug/kg	18.9	8.7	1	09/13/16 09:07	09/13/16 18:08	218-01-9	
Dibenz(a,h)anthracene	26.0	ug/kg	18.9	6.9	1	09/13/16 09:07	09/13/16 18:08	53-70-3	
Fluoranthene	309	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	206-44-0	
Fluorene	<9.4	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	86-73-7	
Indeno(1,2,3-cd)pyrene	62.8	ug/kg	18.9	7.2	1	09/13/16 09:07	09/13/16 18:08	193-39-5	
1-Methylnaphthalene	<9.4	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	90-12-0	
2-Methylnaphthalene	10.5J	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	91-57-6	
Naphthalene	10J	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	91-20-3	
Phenanthrene	128	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	85-01-8	
Pyrene	262	ug/kg	18.9	9.4	1	09/13/16 09:07	09/13/16 18:08	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	48	%	26-130		1	09/13/16 09:07	09/13/16 18:08	321-60-8	
Terphenyl-d14 (S)	64	%	10-130		1	09/13/16 09:07	09/13/16 18:08	1718-51-0	
<b>8260 MSV Med Level Normal List</b> Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	09/12/16 07:30	09/12/16 18:07	120-82-1	W

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Sample: B-3 (1.5-2.5") Lab ID: 40137972004 Collected: 09/07/16 12:00 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	09/12/16 07:30	09/12/16 18:07	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	09/12/16 07:30	09/12/16 18:07	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	09/12/16 07:30	09/12/16 18:07	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	09/12/16 07:30	09/12/16 18:07	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	09/12/16 07:30	09/12/16 18:07	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	09/12/16 07:30	09/12/16 18:07	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	09/12/16 07:30	09/12/16 18:07	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	104-51-8	W

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: B-3 (1.5-2.5') Lab ID: 40137972004 Collected: 09/07/16 12:00 Received: 09/09/16 10:00 Matrix: Solid  
 Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 18:07	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	101	%	53-165		1	09/12/16 07:30	09/12/16 18:07	1868-53-7	
Toluene-d8 (S)	106	%	54-163		1	09/12/16 07:30	09/12/16 18:07	2037-26-5	
4-Bromofluorobenzene (S)	92	%	48-138		1	09/12/16 07:30	09/12/16 18:07	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87							
Percent Moisture	11.7	%	0.10	0.10	1		09/12/16 10:48		

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II

Pace Project No.: 40137972

Sample: TW-4 Lab ID: 40137972005 Collected: 09/07/16 13:45 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	71-43-2	R1
Bromobenzene	<0.23	ug/L	1.0	0.23	1		09/12/16 20:05	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		09/12/16 20:05	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		09/12/16 20:05	74-83-9	R1
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 20:05	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		09/12/16 20:05	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	56-23-5	M1,R1
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	108-90-7	R1
Chloroethane	<0.37	ug/L	1.0	0.37	1		09/12/16 20:05	75-00-3	R1
Chloroform	<2.5	ug/L	5.0	2.5	1		09/12/16 20:05	67-66-3	M1,R1
Chloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	74-87-3	R1
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		09/12/16 20:05	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		09/12/16 20:05	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	124-48-1	R1
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		09/12/16 20:05	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		09/12/16 20:05	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		09/12/16 20:05	75-71-8	R1
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		09/12/16 20:05	75-34-3	M1,R1
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		09/12/16 20:05	107-06-2	M1,R1
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		09/12/16 20:05	75-35-4	R1
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 20:05	156-59-2	M1,R1
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 20:05	156-60-5	M1,R1
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		09/12/16 20:05	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		09/12/16 20:05	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		09/12/16 20:05	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		09/12/16 20:05	10061-02-6	R1
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	100-41-4	R1
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		09/12/16 20:05	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		09/12/16 20:05	98-82-8	R1
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		09/12/16 20:05	75-09-2	M1,R1
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		09/12/16 20:05	1634-04-4	R1
Naphthalene	<2.5	ug/L	5.0	2.5	1		09/12/16 20:05	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	100-42-5	R1
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		09/12/16 20:05	630-20-6	

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: TW-4 Lab ID: 40137972005 Collected: 09/07/16 13:45 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		09/12/16 20:05	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	127-18-4	R1
Toluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	108-88-3	R1
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		09/12/16 20:05	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 20:05	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	71-55-6	M1,R1
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		09/12/16 20:05	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		09/12/16 20:05	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		09/12/16 20:05	75-69-4	R1
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		09/12/16 20:05	75-01-4	R1
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		09/12/16 20:05	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		09/12/16 20:05	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:05	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		09/12/16 20:05	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		09/12/16 20:05	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		09/12/16 20:05	2037-26-5	

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: TW-1 Lab ID: 40137972006 Collected: 09/08/16 10:00 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		09/12/16 20:27	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		09/12/16 20:27	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		09/12/16 20:27	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 20:27	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		09/12/16 20:27	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		09/12/16 20:27	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		09/12/16 20:27	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		09/12/16 20:27	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		09/12/16 20:27	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		09/12/16 20:27	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		09/12/16 20:27	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		09/12/16 20:27	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		09/12/16 20:27	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		09/12/16 20:27	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		09/12/16 20:27	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 20:27	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 20:27	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		09/12/16 20:27	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		09/12/16 20:27	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		09/12/16 20:27	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		09/12/16 20:27	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		09/12/16 20:27	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		09/12/16 20:27	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		09/12/16 20:27	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		09/12/16 20:27	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		09/12/16 20:27	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		09/12/16 20:27	630-20-6	

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: TW-1 Lab ID: 40137972006 Collected: 09/08/16 10:00 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		09/12/16 20:27	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		09/12/16 20:27	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 20:27	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		09/12/16 20:27	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		09/12/16 20:27	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		09/12/16 20:27	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		09/12/16 20:27	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		09/12/16 20:27	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		09/12/16 20:27	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:27	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		09/12/16 20:27	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		09/12/16 20:27	1868-53-7	
Toluene-d8 (S)	90	%	70-130		1		09/12/16 20:27	2037-26-5	

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Sample: TW-2 Lab ID: 40137972007 Collected: 09/08/16 10:45 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		09/12/16 20:50	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		09/12/16 20:50	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		09/12/16 20:50	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 20:50	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		09/12/16 20:50	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		09/12/16 20:50	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		09/12/16 20:50	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		09/12/16 20:50	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		09/12/16 20:50	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		09/12/16 20:50	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		09/12/16 20:50	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		09/12/16 20:50	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		09/12/16 20:50	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		09/12/16 20:50	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		09/12/16 20:50	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 20:50	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 20:50	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		09/12/16 20:50	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		09/12/16 20:50	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		09/12/16 20:50	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		09/12/16 20:50	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		09/12/16 20:50	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		09/12/16 20:50	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		09/12/16 20:50	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		09/12/16 20:50	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		09/12/16 20:50	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		09/12/16 20:50	630-20-6	

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II

Pace Project No.: 40137972

Sample: TW-2 Lab ID: 40137972007 Collected: 09/08/16 10:45 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		09/12/16 20:50	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		09/12/16 20:50	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 20:50	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		09/12/16 20:50	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		09/12/16 20:50	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		09/12/16 20:50	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		09/12/16 20:50	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		09/12/16 20:50	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		09/12/16 20:50	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		09/12/16 20:50	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	90	%	70-130		1		09/12/16 20:50	460-00-4	
Dibromofluoromethane (S)	123	%	70-130		1		09/12/16 20:50	1868-53-7	
Toluene-d8 (S)	92	%	70-130		1		09/12/16 20:50	2037-26-5	

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: TW-3 Lab ID: 40137972008 Collected: 09/08/16 11:10 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		09/12/16 21:12	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		09/12/16 21:12	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		09/12/16 21:12	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 21:12	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		09/12/16 21:12	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		09/12/16 21:12	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		09/12/16 21:12	67-66-3	
Chloromethane	0.96J	ug/L	1.0	0.50	1		09/12/16 21:12	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		09/12/16 21:12	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		09/12/16 21:12	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		09/12/16 21:12	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		09/12/16 21:12	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		09/12/16 21:12	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		09/12/16 21:12	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		09/12/16 21:12	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		09/12/16 21:12	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 21:12	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/12/16 21:12	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		09/12/16 21:12	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		09/12/16 21:12	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		09/12/16 21:12	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		09/12/16 21:12	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		09/12/16 21:12	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		09/12/16 21:12	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		09/12/16 21:12	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		09/12/16 21:12	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		09/12/16 21:12	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		09/12/16 21:12	630-20-6	

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: TW-3 Lab ID: 40137972008 Collected: 09/08/16 11:10 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		09/12/16 21:12	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		09/12/16 21:12	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		09/12/16 21:12	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		09/12/16 21:12	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		09/12/16 21:12	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		09/12/16 21:12	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		09/12/16 21:12	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		09/12/16 21:12	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		09/12/16 21:12	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		09/12/16 21:12	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	91	%	70-130		1		09/12/16 21:12	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		09/12/16 21:12	1868-53-7	
Toluene-d8 (S)	91	%	70-130		1		09/12/16 21:12	2037-26-5	

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Sample: METHANOL TRIP BLANK Lab ID: 40137972009 Collected: 09/08/16 00:00 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	630-20-6	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-35-4	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	563-58-6	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	87-61-6	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	96-18-4	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	09/12/16 07:30	09/12/16 15:52	120-82-1	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	95-63-6	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	09/12/16 07:30	09/12/16 15:52	96-12-8	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	106-93-4	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	95-50-1	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	78-87-5	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	108-67-8	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	541-73-1	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	142-28-9	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	106-46-7	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	594-20-7	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	106-43-4	W
Benzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	09/12/16 07:30	09/12/16 15:52	74-83-9	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	09/12/16 07:30	09/12/16 15:52	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	09/12/16 07:30	09/12/16 15:52	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	124-48-1	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	74-95-3	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-71-8	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	98-82-8	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-09-2	W
Naphthalene	<40.0	ug/kg	250	40.0	1	09/12/16 07:30	09/12/16 15:52	91-20-3	W
Styrene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	100-42-5	W

### REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: METHANOL TRIP BLANK Lab ID: 40137972009 Collected: 09/08/16 00:00 Received: 09/09/16 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-69-4	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	75-01-4	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	09/12/16 07:30	09/12/16 15:52	1330-20-7	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	09/12/16 07:30	09/12/16 15:52	179601-23-1	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	104-51-8	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	103-65-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	95-47-6	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	99-87-6	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	98-06-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	09/12/16 07:30	09/12/16 15:52	10061-02-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	97	%	53-165		1	09/12/16 07:30	09/12/16 15:52	1868-53-7	
Toluene-d8 (S)	88	%	54-163		1	09/12/16 07:30	09/12/16 15:52	2037-26-5	
4-Bromofluorobenzene (S)	84	%	48-138		1	09/12/16 07:30	09/12/16 15:52	460-00-4	

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### ANALYTICAL RESULTS

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: TRIP BLANK      Lab ID: 40137972010      Collected: 09/08/16 00:00      Received: 09/09/16 10:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		09/14/16 16:20	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		09/14/16 16:20	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		09/14/16 16:20	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		09/14/16 16:20	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		09/14/16 16:20	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		09/14/16 16:20	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		09/14/16 16:20	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		09/14/16 16:20	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		09/14/16 16:20	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		09/14/16 16:20	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		09/14/16 16:20	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		09/14/16 16:20	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		09/14/16 16:20	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		09/14/16 16:20	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		09/14/16 16:20	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/14/16 16:20	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		09/14/16 16:20	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		09/14/16 16:20	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		09/14/16 16:20	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		09/14/16 16:20	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		09/14/16 16:20	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		09/14/16 16:20	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		09/14/16 16:20	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		09/14/16 16:20	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		09/14/16 16:20	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		09/14/16 16:20	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		09/14/16 16:20	630-20-6	

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**ANALYTICAL RESULTS**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Sample: TRIP BLANK Lab ID: 40137972010 Collected: 09/08/16 00:00 Received: 09/09/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		09/14/16 16:20	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		09/14/16 16:20	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		09/14/16 16:20	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		09/14/16 16:20	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		09/14/16 16:20	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		09/14/16 16:20	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		09/14/16 16:20	75-01-4	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		09/14/16 16:20	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		09/14/16 16:20	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		09/14/16 16:20	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89	%	70-130		1		09/14/16 16:20	460-00-4	
Dibromofluoromethane (S)	114	%	70-130		1		09/14/16 16:20	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		09/14/16 16:20	2037-26-5	

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**QUALITY CONTROL DATA**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

QC Batch: 234949 Analysis Method: EPA 7471  
 QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury  
 Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004

METHOD BLANK: 1392105 Matrix: Solid  
 Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.037	0.12	09/16/16 10:58	

LABORATORY CONTROL SAMPLE: 1392106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.83	0.89	107	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1392107 1392108

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40138059013	Result	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
Mercury	mg/kg	<0.036		.83	.83	0.92	0.92	108	108	85-115	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1392109 1392110

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40138059027	Result	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
Mercury	mg/kg	<0.036		.83	.83	0.93	0.93	111	110	85-115	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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**QUALITY CONTROL DATA**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

QC Batch: 234673 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
 Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004

METHOD BLANK: 1390416 Matrix: Solid  
 Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.64	2.0	09/14/16 10:14	
Barium	mg/kg	0.32J	0.50	09/14/16 10:14	
Cadmium	mg/kg	<0.066	0.50	09/14/16 10:14	
Chromium	mg/kg	<0.19	1.0	09/14/16 10:14	
Lead	mg/kg	<0.43	1.2	09/14/16 10:14	
Selenium	mg/kg	<0.77	2.0	09/14/16 10:14	
Silver	mg/kg	<0.28	1.0	09/14/16 10:14	

LABORATORY CONTROL SAMPLE: 1390417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	48.4	97	80-120	
Barium	mg/kg	50	48.5	97	80-120	
Cadmium	mg/kg	50	48.8	98	80-120	
Chromium	mg/kg	50	49.2	98	80-120	
Lead	mg/kg	50	48.6	97	80-120	
Selenium	mg/kg	50	47.8	96	80-120	
Silver	mg/kg	25	24.5	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1390418 1390419

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max			
		40137804003 Result	Spike Conc.	Spike Conc.	MS Result				MSD Result	RPD	RPD	Qual
Arsenic	mg/kg	1.7J	81.1	81.1	76.3	75.7	92	91	75-125	1	20	
Barium	mg/kg	220	81.1	81.1	265	267	56	59	75-125	1	20	M0
Cadmium	mg/kg	0.47J	81.1	81.1	77.2	77.6	95	95	75-125	0	20	
Chromium	mg/kg	19.0	81.1	81.1	96.6	97.1	96	96	75-125	1	20	
Lead	mg/kg	6.1	81.1	81.1	81.1	81.4	93	93	75-125	0	20	
Selenium	mg/kg	<1.2	81.1	81.1	74.6	74.9	91	92	75-125	0	20	
Silver	mg/kg	<0.45	40.5	40.5	39.0	39.4	96	97	75-125	1	20	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

QC Batch: 234580 Analysis Method: EPA 8260  
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List  
Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004, 40137972009

METHOD BLANK: 1390040 Matrix: Solid  
Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004, 40137972009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	09/12/16 09:05	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	09/12/16 09:05	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	09/12/16 09:05	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	09/12/16 09:05	
1,1-Dichloroethane	ug/kg	<17.6	50.0	09/12/16 09:05	
1,1-Dichloroethene	ug/kg	<17.6	50.0	09/12/16 09:05	
1,1-Dichloropropene	ug/kg	<14.0	50.0	09/12/16 09:05	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	09/12/16 09:05	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	09/12/16 09:05	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	09/12/16 09:05	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	09/12/16 09:05	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	09/12/16 09:05	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	09/12/16 09:05	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	09/12/16 09:05	
1,2-Dichloroethane	ug/kg	<15.0	50.0	09/12/16 09:05	
1,2-Dichloropropane	ug/kg	<16.8	50.0	09/12/16 09:05	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	09/12/16 09:05	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	09/12/16 09:05	
1,3-Dichloropropane	ug/kg	<12.0	50.0	09/12/16 09:05	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	09/12/16 09:05	
2,2-Dichloropropane	ug/kg	<12.6	50.0	09/12/16 09:05	
2-Chlorotoluene	ug/kg	<15.8	50.0	09/12/16 09:05	
4-Chlorotoluene	ug/kg	<13.0	50.0	09/12/16 09:05	
Benzene	ug/kg	<9.2	20.0	09/12/16 09:05	
Bromobenzene	ug/kg	<20.6	50.0	09/12/16 09:05	
Bromochloromethane	ug/kg	<21.4	50.0	09/12/16 09:05	
Bromodichloromethane	ug/kg	<9.8	50.0	09/12/16 09:05	
Bromoform	ug/kg	<19.8	50.0	09/12/16 09:05	
Bromomethane	ug/kg	<69.9	250	09/12/16 09:05	
Carbon tetrachloride	ug/kg	<12.1	50.0	09/12/16 09:05	
Chlorobenzene	ug/kg	<14.8	50.0	09/12/16 09:05	
Chloroethane	ug/kg	<67.0	250	09/12/16 09:05	
Chloroform	ug/kg	<46.4	250	09/12/16 09:05	
Chloromethane	ug/kg	<20.4	50.0	09/12/16 09:05	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	09/12/16 09:05	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	09/12/16 09:05	
Dibromochloromethane	ug/kg	<17.9	50.0	09/12/16 09:05	
Dibromomethane	ug/kg	<19.3	50.0	09/12/16 09:05	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	09/12/16 09:05	
Diisopropyl ether	ug/kg	<17.7	50.0	09/12/16 09:05	
Ethylbenzene	ug/kg	<12.4	50.0	09/12/16 09:05	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II

Pace Project No.: 40137972

METHOD BLANK: 1390040

Matrix: Solid

Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004, 40137972009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	09/12/16 09:05	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	09/12/16 09:05	
m&p-Xylene	ug/kg	<34.4	100	09/12/16 09:05	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	09/12/16 09:05	
Methylene Chloride	ug/kg	<16.2	50.0	09/12/16 09:05	
n-Butylbenzene	ug/kg	<10.5	50.0	09/12/16 09:05	
n-Propylbenzene	ug/kg	<11.6	50.0	09/12/16 09:05	
Naphthalene	ug/kg	<40.0	250	09/12/16 09:05	
o-Xylene	ug/kg	<14.0	50.0	09/12/16 09:05	
p-Isopropyltoluene	ug/kg	<12.0	50.0	09/12/16 09:05	
sec-Butylbenzene	ug/kg	<11.9	50.0	09/12/16 09:05	
Styrene	ug/kg	<9.0	50.0	09/12/16 09:05	
tert-Butylbenzene	ug/kg	<9.5	50.0	09/12/16 09:05	
Tetrachloroethene	ug/kg	<12.9	50.0	09/12/16 09:05	
Toluene	ug/kg	<11.2	50.0	09/12/16 09:05	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	09/12/16 09:05	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	09/12/16 09:05	
Trichloroethene	ug/kg	<23.6	50.0	09/12/16 09:05	
Trichlorofluoromethane	ug/kg	<24.7	50.0	09/12/16 09:05	
Vinyl chloride	ug/kg	<21.1	50.0	09/12/16 09:05	
Xylene (Total)	ug/kg	<48.4	150	09/12/16 09:05	
4-Bromofluorobenzene (S)	%	80	48-138	09/12/16 09:05	
Dibromofluoromethane (S)	%	92	53-165	09/12/16 09:05	
Toluene-d8 (S)	%	90	54-163	09/12/16 09:05	

LABORATORY CONTROL SAMPLE: 1390041

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2180	87	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2410	96	70-130	
1,1,2-Trichloroethane	ug/kg	2500	2510	100	70-130	
1,1-Dichloroethane	ug/kg	2500	2610	104	70-133	
1,1-Dichloroethene	ug/kg	2500	2190	88	70-130	
1,2,4-Trichlorobenzene	ug/kg	2500	2500	100	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2320	93	50-150	
1,2-Dibromoethane (EDB)	ug/kg	2500	2460	98	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2360	94	70-130	
1,2-Dichloroethane	ug/kg	2500	2110	85	70-138	
1,2-Dichloropropane	ug/kg	2500	2810	112	70-130	
1,3-Dichlorobenzene	ug/kg	2500	2370	95	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2400	96	70-130	
Benzene	ug/kg	2500	2660	106	70-130	
Bromodichloromethane	ug/kg	2500	2530	101	70-130	
Bromoform	ug/kg	2500	2330	93	68-130	

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

LABORATORY CONTROL SAMPLE: 1390041

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/kg	2500	1640	66	25-163	
Carbon tetrachloride	ug/kg	2500	2360	94	70-130	
Chlorobenzene	ug/kg	2500	2390	96	70-130	
Chloroethane	ug/kg	2500	1870	75	34-151	
Chloroform	ug/kg	2500	2340	93	70-130	
Chloromethane	ug/kg	2500	1770	71	52-130	
cis-1,2-Dichloroethene	ug/kg	2500	2530	101	70-130	
cis-1,3-Dichloropropene	ug/kg	2500	2470	99	70-130	
Dibromochloromethane	ug/kg	2500	2280	91	70-130	
Dichlorodifluoromethane	ug/kg	2500	1140	46	27-150	
Ethylbenzene	ug/kg	2500	2320	93	70-130	
Isopropylbenzene (Cumene)	ug/kg	2500	2450	98	70-130	
m&p-Xylene	ug/kg	5000	4840	97	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2380	95	70-130	
Methylene Chloride	ug/kg	2500	2400	96	70-131	
o-Xylene	ug/kg	2500	2260	90	70-130	
Styrene	ug/kg	2500	2370	95	70-130	
Tetrachloroethene	ug/kg	2500	2350	94	70-130	
Toluene	ug/kg	2500	2550	102	70-130	
trans-1,2-Dichloroethene	ug/kg	2500	2400	96	70-130	
trans-1,3-Dichloropropene	ug/kg	2500	2320	93	70-130	
Trichloroethene	ug/kg	2500	2470	99	70-130	
Trichlorofluoromethane	ug/kg	2500	1900	76	50-150	
Vinyl chloride	ug/kg	2500	2070	83	57-130	
Xylene (Total)	ug/kg	7500	7100	95	70-130	
4-Bromofluorobenzene (S)	%			90	48-138	
Dibromofluoromethane (S)	%			99	53-165	
Toluene-d8 (S)	%			95	54-163	

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

QC Batch: 234529 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 40137972005, 40137972006, 40137972007, 40137972008

METHOD BLANK: 1389859 Matrix: Water  
Associated Lab Samples: 40137972005, 40137972006, 40137972007, 40137972008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	09/12/16 17:28	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	09/12/16 17:28	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	09/12/16 17:28	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	09/12/16 17:28	
1,1-Dichloroethane	ug/L	<0.24	1.0	09/12/16 17:28	
1,1-Dichloroethene	ug/L	<0.41	1.0	09/12/16 17:28	
1,1-Dichloropropene	ug/L	<0.44	1.0	09/12/16 17:28	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	09/12/16 17:28	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	09/12/16 17:28	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	09/12/16 17:28	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	09/12/16 17:28	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	09/12/16 17:28	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	09/12/16 17:28	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	09/12/16 17:28	
1,2-Dichloroethane	ug/L	<0.17	1.0	09/12/16 17:28	
1,2-Dichloropropane	ug/L	<0.23	1.0	09/12/16 17:28	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	09/12/16 17:28	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	09/12/16 17:28	
1,3-Dichloropropane	ug/L	<0.50	1.0	09/12/16 17:28	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	09/12/16 17:28	
2,2-Dichloropropane	ug/L	<0.48	1.0	09/12/16 17:28	
2-Chlorotoluene	ug/L	<0.50	1.0	09/12/16 17:28	
4-Chlorotoluene	ug/L	<0.21	1.0	09/12/16 17:28	
Benzene	ug/L	<0.50	1.0	09/12/16 17:28	
Bromobenzene	ug/L	<0.23	1.0	09/12/16 17:28	
Bromochloromethane	ug/L	<0.34	1.0	09/12/16 17:28	
Bromodichloromethane	ug/L	<0.50	1.0	09/12/16 17:28	
Bromoform	ug/L	<0.50	1.0	09/12/16 17:28	
Bromomethane	ug/L	<2.4	5.0	09/12/16 17:28	
Carbon tetrachloride	ug/L	<0.50	1.0	09/12/16 17:28	
Chlorobenzene	ug/L	<0.50	1.0	09/12/16 17:28	
Chloroethane	ug/L	<0.37	1.0	09/12/16 17:28	
Chloroform	ug/L	<2.5	5.0	09/12/16 17:28	
Chloromethane	ug/L	<0.50	1.0	09/12/16 17:28	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	09/12/16 17:28	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	09/12/16 17:28	
Dibromochloromethane	ug/L	<0.50	1.0	09/12/16 17:28	
Dibromomethane	ug/L	<0.43	1.0	09/12/16 17:28	
Dichlorodifluoromethane	ug/L	<0.22	1.0	09/12/16 17:28	
Diisopropyl ether	ug/L	<0.50	1.0	09/12/16 17:28	
Ethylbenzene	ug/L	<0.50	1.0	09/12/16 17:28	

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

METHOD BLANK: 1389859 Matrix: Water  
Associated Lab Samples: 40137972005, 40137972006, 40137972007, 40137972008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	09/12/16 17:28	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	09/12/16 17:28	
m&p-Xylene	ug/L	<1.0	2.0	09/12/16 17:28	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	09/12/16 17:28	
Methylene Chloride	ug/L	<0.23	1.0	09/12/16 17:28	
n-Butylbenzene	ug/L	<0.50	1.0	09/12/16 17:28	
n-Propylbenzene	ug/L	<0.50	1.0	09/12/16 17:28	
Naphthalene	ug/L	<2.5	5.0	09/12/16 17:28	
o-Xylene	ug/L	<0.50	1.0	09/12/16 17:28	
p-Isopropyltoluene	ug/L	<0.50	1.0	09/12/16 17:28	
sec-Butylbenzene	ug/L	<2.2	5.0	09/12/16 17:28	
Styrene	ug/L	<0.50	1.0	09/12/16 17:28	
tert-Butylbenzene	ug/L	<0.18	1.0	09/12/16 17:28	
Tetrachloroethene	ug/L	<0.50	1.0	09/12/16 17:28	
Toluene	ug/L	<0.50	1.0	09/12/16 17:28	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	09/12/16 17:28	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	09/12/16 17:28	
Trichloroethene	ug/L	<0.33	1.0	09/12/16 17:28	
Trichlorofluoromethane	ug/L	<0.18	1.0	09/12/16 17:28	
Vinyl chloride	ug/L	<0.18	1.0	09/12/16 17:28	
Xylene (Total)	ug/L	<1.5	3.0	09/12/16 17:28	
4-Bromofluorobenzene (S)	%	90	70-130	09/12/16 17:28	
Dibromofluoromethane (S)	%	105	70-130	09/12/16 17:28	
Toluene-d8 (S)	%	88	70-130	09/12/16 17:28	

LABORATORY CONTROL SAMPLE: 1389860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	55.3	111	70-131	
1,1,1,2-Tetrachloroethane	ug/L	50	46.5	93	67-130	
1,1,2-Trichloroethane	ug/L	50	50.9	102	70-130	
1,1-Dichloroethane	ug/L	50	55.3	111	70-133	
1,1-Dichloroethene	ug/L	50	49.7	99	70-130	
1,2,4-Trichlorobenzene	ug/L	50	46.5	93	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.2	100	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	52.9	106	70-130	
1,2-Dichlorobenzene	ug/L	50	47.8	96	70-130	
1,2-Dichloroethane	ug/L	50	53.1	106	70-130	
1,2-Dichloropropane	ug/L	50	52.4	105	70-130	
1,3-Dichlorobenzene	ug/L	50	47.2	94	70-130	
1,4-Dichlorobenzene	ug/L	50	46.6	93	70-130	
Benzene	ug/L	50	51.9	104	60-135	
Bromodichloromethane	ug/L	50	53.6	107	70-130	
Bromoform	ug/L	50	47.3	95	70-130	

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

LABORATORY CONTROL SAMPLE: 1389860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	24.9	50	33-130	
Carbon tetrachloride	ug/L	50	52.5	105	70-138	
Chlorobenzene	ug/L	50	50.1	100	70-130	
Chloroethane	ug/L	50	43.5	87	51-130	
Chloroform	ug/L	50	56.2	112	70-130	
Chloromethane	ug/L	50	29.7	59	25-132	
cis-1,2-Dichloroethene	ug/L	50	55.1	110	69-130	
cis-1,3-Dichloropropene	ug/L	50	44.5	89	70-130	
Dibromochloromethane	ug/L	50	51.5	103	70-130	
Dichlorodifluoromethane	ug/L	50	24.0	48	23-130	
Ethylbenzene	ug/L	50	49.4	99	70-136	
Isopropylbenzene (Cumene)	ug/L	50	52.0	104	70-140	
m&p-Xylene	ug/L	100	105	105	70-138	
Methyl-tert-butyl ether	ug/L	50	55.0	110	66-138	
Methylene Chloride	ug/L	50	52.6	105	70-130	
o-Xylene	ug/L	50	50.6	101	70-134	
Styrene	ug/L	50	50.5	101	70-133	
Tetrachloroethene	ug/L	50	50.0	100	70-138	
Toluene	ug/L	50	48.7	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	52.2	104	70-131	
trans-1,3-Dichloropropene	ug/L	50	41.3	83	69-130	
Trichloroethene	ug/L	50	52.5	105	70-130	
Trichlorofluoromethane	ug/L	50	49.6	99	50-150	
Vinyl chloride	ug/L	50	41.0	82	49-130	
Xylene (Total)	ug/L	150	155	104	70-135	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			106	70-130	
Toluene-d8 (S)	%			92	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1390356 1390357

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual		
		40137972005 Result	Spike Conc.	Spike Conc.	MS Result						MSD Result	
1,1,1-Trichloroethane	ug/L	<0.50	50	50	51.7	74.7	103	149	70-134	36	20	M1,R1
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	45.3	53.0	91	106	67-130	16	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	49.6	60.4	99	121	70-130	20	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	55.6	71.8	111	144	70-134	25	20	M1,R1
1,1-Dichloroethene	ug/L	<0.41	50	50	50.5	66.3	101	133	68-136	27	20	R1
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	44.9	55.1	88	108	62-139	20	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	47.9	56.2	96	112	50-150	16	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	51.3	62.6	103	125	70-130	20	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	44.9	54.5	90	109	70-130	19	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	52.1	67.6	104	135	70-130	26	20	M1,R1
1,2-Dichloropropane	ug/L	<0.23	50	50	51.2	61.1	102	122	70-130	18	20	

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**QUALITY CONTROL DATA**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1390356		1390357		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40137972005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,3-Dichlorobenzene	ug/L	<0.50	50	50	44.4	53.9	88	107	70-131	19	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	43.5	53.1	86	105	70-130	20	20		
Benzene	ug/L	<0.50	50	50	52.1	67.4	104	135	57-138	26	20	R1	
Bromodichloromethane	ug/L	<0.50	50	50	52.4	63.7	105	127	70-130	19	20		
Bromoform	ug/L	<0.50	50	50	46.5	55.8	93	112	70-130	18	20		
Bromomethane	ug/L	<2.4	50	50	29.1	40.6	58	81	33-130	33	27	R1	
Carbon tetrachloride	ug/L	<0.50	50	50	53.9	71.6	108	143	70-138	28	20	M1,R1	
Chlorobenzene	ug/L	<0.50	50	50	49.1	60.4	98	121	70-130	21	20	R1	
Chloroethane	ug/L	<0.37	50	50	42.6	54.8	85	110	51-130	25	20	R1	
Chloroform	ug/L	<2.5	50	50	52.1	72.5	104	145	70-130	33	20	M1,R1	
Chloromethane	ug/L	<0.50	50	50	30.3	37.4	61	75	25-132	21	20	R1	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	54.7	71.0	109	142	61-140	26	20	M1,R1	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	43.3	52.2	87	104	70-130	19	20		
Dibromochloromethane	ug/L	<0.50	50	50	50.1	61.7	100	123	70-130	21	20	R1	
Dichlorodifluoromethane	ug/L	<0.22	50	50	24.3	31.0	49	62	23-130	24	20	R1	
Ethylbenzene	ug/L	<0.50	50	50	48.5	60.2	97	120	70-138	22	20	R1	
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	51.3	64.1	102	128	70-152	22	20	R1	
m&p-Xylene	ug/L	<1.0	100	100	103	126	103	126	70-140	20	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	53.3	67.3	107	135	66-139	23	20	R1	
Methylene Chloride	ug/L	<0.23	50	50	52.1	67.8	104	136	70-130	26	20	M1,R1	
o-Xylene	ug/L	<0.50	50	50	50.8	62.1	102	124	70-134	20	20		
Styrene	ug/L	<0.50	50	50	48.3	61.0	97	122	70-138	23	20	R1	
Tetrachloroethene	ug/L	<0.50	50	50	49.2	60.8	98	122	70-148	21	20	R1	
Toluene	ug/L	<0.50	50	50	48.3	59.5	96	119	70-130	21	20	R1	
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	53.1	69.3	106	139	70-133	27	20	M1,R1	
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	39.9	49.9	80	100	69-130	22	20	R1	
Trichloroethene	ug/L	<0.33	50	50	51.6	62.7	103	125	70-131	19	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	51.7	66.6	103	133	50-150	25	20	R1	
Vinyl chloride	ug/L	<0.18	50	50	42.0	55.0	84	110	49-133	27	20	R1	
Xylene (Total)	ug/L	<1.5	150	150	154	188	103	125	70-135	20	20		
4-Bromofluorobenzene (S)	%						102	104	70-130				
Dibromofluoromethane (S)	%						97	118	70-130				
Toluene-d8 (S)	%						93	94	70-130				

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**QUALITY CONTROL DATA**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

QC Batch: 234828 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
 Associated Lab Samples: 40137972010

METHOD BLANK: 1391140 Matrix: Water  
 Associated Lab Samples: 40137972010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	09/14/16 11:04	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	09/14/16 11:04	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	09/14/16 11:04	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	09/14/16 11:04	
1,1-Dichloroethane	ug/L	<0.24	1.0	09/14/16 11:04	
1,1-Dichloroethene	ug/L	<0.41	1.0	09/14/16 11:04	
1,1-Dichloropropene	ug/L	<0.44	1.0	09/14/16 11:04	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	09/14/16 11:04	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	09/14/16 11:04	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	09/14/16 11:04	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	09/14/16 11:04	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	09/14/16 11:04	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	09/14/16 11:04	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	09/14/16 11:04	
1,2-Dichloroethane	ug/L	<0.17	1.0	09/14/16 11:04	
1,2-Dichloropropane	ug/L	<0.23	1.0	09/14/16 11:04	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	09/14/16 11:04	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	09/14/16 11:04	
1,3-Dichloropropane	ug/L	<0.50	1.0	09/14/16 11:04	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	09/14/16 11:04	
2,2-Dichloropropane	ug/L	<0.48	1.0	09/14/16 11:04	
2-Chlorotoluene	ug/L	<0.50	1.0	09/14/16 11:04	
4-Chlorotoluene	ug/L	<0.21	1.0	09/14/16 11:04	
Benzene	ug/L	<0.50	1.0	09/14/16 11:04	
Bromobenzene	ug/L	<0.23	1.0	09/14/16 11:04	
Bromochloromethane	ug/L	<0.34	1.0	09/14/16 11:04	
Bromodichloromethane	ug/L	<0.50	1.0	09/14/16 11:04	
Bromoform	ug/L	<0.50	1.0	09/14/16 11:04	
Bromomethane	ug/L	<2.4	5.0	09/14/16 11:04	
Carbon tetrachloride	ug/L	<0.50	1.0	09/14/16 11:04	
Chlorobenzene	ug/L	<0.50	1.0	09/14/16 11:04	
Chloroethane	ug/L	<0.37	1.0	09/14/16 11:04	
Chloroform	ug/L	<2.5	5.0	09/14/16 11:04	
Chloromethane	ug/L	<0.50	1.0	09/14/16 11:04	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	09/14/16 11:04	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	09/14/16 11:04	
Dibromochloromethane	ug/L	<0.50	1.0	09/14/16 11:04	
Dibromomethane	ug/L	<0.43	1.0	09/14/16 11:04	
Dichlorodifluoromethane	ug/L	<0.22	1.0	09/14/16 11:04	
Diisopropyl ether	ug/L	<0.50	1.0	09/14/16 11:04	
Ethylbenzene	ug/L	<0.50	1.0	09/14/16 11:04	

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**QUALITY CONTROL DATA**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

METHOD BLANK: 1391140 Matrix: Water  
 Associated Lab Samples: 40137972010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	09/14/16 11:04	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	09/14/16 11:04	
m&p-Xylene	ug/L	<1.0	2.0	09/14/16 11:04	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	09/14/16 11:04	
Methylene Chloride	ug/L	<0.23	1.0	09/14/16 11:04	
n-Butylbenzene	ug/L	<0.50	1.0	09/14/16 11:04	
n-Propylbenzene	ug/L	<0.50	1.0	09/14/16 11:04	
Naphthalene	ug/L	<2.5	5.0	09/14/16 11:04	
o-Xylene	ug/L	<0.50	1.0	09/14/16 11:04	
p-Isopropyltoluene	ug/L	<0.50	1.0	09/14/16 11:04	
sec-Butylbenzene	ug/L	<2.2	5.0	09/14/16 11:04	
Styrene	ug/L	<0.50	1.0	09/14/16 11:04	
tert-Butylbenzene	ug/L	<0.18	1.0	09/14/16 11:04	
Tetrachloroethene	ug/L	<0.50	1.0	09/14/16 11:04	
Toluene	ug/L	<0.50	1.0	09/14/16 11:04	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	09/14/16 11:04	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	09/14/16 11:04	
Trichloroethene	ug/L	<0.33	1.0	09/14/16 11:04	
Trichlorofluoromethane	ug/L	<0.18	1.0	09/14/16 11:04	
Vinyl chloride	ug/L	<0.18	1.0	09/14/16 11:04	
Xylene (Total)	ug/L	<1.5	3.0	09/14/16 11:04	
4-Bromofluorobenzene (S)	%	87	70-130	09/14/16 11:04	
Dibromofluoromethane (S)	%	99	70-130	09/14/16 11:04	
Toluene-d8 (S)	%	95	70-130	09/14/16 11:04	

LABORATORY CONTROL SAMPLE: 1391141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	52.7	105	70-131	
1,1,1,2-Tetrachloroethane	ug/L	50	48.0	96	67-130	
1,1,2-Trichloroethane	ug/L	50	49.4	99	70-130	
1,1-Dichloroethane	ug/L	50	56.4	113	70-133	
1,1-Dichloroethene	ug/L	50	47.8	96	70-130	
1,2,4-Trichlorobenzene	ug/L	50	40.7	81	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	43.0	86	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	47.2	94	70-130	
1,2-Dichlorobenzene	ug/L	50	46.7	93	70-130	
1,2-Dichloroethane	ug/L	50	55.3	111	70-130	
1,2-Dichloropropane	ug/L	50	51.8	104	70-130	
1,3-Dichlorobenzene	ug/L	50	45.7	91	70-130	
1,4-Dichlorobenzene	ug/L	50	45.6	91	70-130	
Benzene	ug/L	50	56.8	114	60-135	
Bromodichloromethane	ug/L	50	53.4	107	70-130	
Bromoform	ug/L	50	44.0	88	70-130	

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

LABORATORY CONTROL SAMPLE: 1391141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	31.5	63	33-130	
Carbon tetrachloride	ug/L	50	50.6	101	70-138	
Chlorobenzene	ug/L	50	47.4	95	70-130	
Chloroethane	ug/L	50	45.7	91	51-130	
Chloroform	ug/L	50	55.6	111	70-130	
Chloromethane	ug/L	50	39.1	78	25-132	
cis-1,2-Dichloroethene	ug/L	50	54.7	109	69-130	
cis-1,3-Dichloropropene	ug/L	50	51.4	103	70-130	
Dibromochloromethane	ug/L	50	48.1	96	70-130	
Dichlorodifluoromethane	ug/L	50	40.9	82	23-130	
Ethylbenzene	ug/L	50	49.6	99	70-136	
Isopropylbenzene (Cumene)	ug/L	50	51.0	102	70-140	
m&p-Xylene	ug/L	100	103	103	70-138	
Methyl-tert-butyl ether	ug/L	50	55.1	110	66-138	
Methylene Chloride	ug/L	50	50.8	102	70-130	
o-Xylene	ug/L	50	49.0	98	70-134	
Styrene	ug/L	50	52.8	106	70-133	
Tetrachloroethene	ug/L	50	43.5	87	70-138	
Toluene	ug/L	50	49.5	99	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.8	104	70-131	
trans-1,3-Dichloropropene	ug/L	50	46.3	93	69-130	
Trichloroethene	ug/L	50	51.1	102	70-130	
Trichlorofluoromethane	ug/L	50	51.5	103	50-150	
Vinyl chloride	ug/L	50	50.9	102	49-130	
Xylene (Total)	ug/L	150	152	102	70-135	
4-Bromofluorobenzene (S)	%			97	70-130	
Dibromofluoromethane (S)	%			106	70-130	
Toluene-d8 (S)	%			94	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1391218 1391219

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		40138122008 Result	Spike Conc.	Spike Conc.	MS Result							
1,1,1-Trichloroethane	ug/L	<0.50	50	50	51.8	54.4	104	109	70-134	5	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	48.1	52.4	96	105	67-130	9	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	46.9	51.9	94	104	70-130	10	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	54.7	58.6	109	117	70-134	7	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	46.1	50.2	92	100	68-136	8	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	42.1	45.4	84	91	62-139	8	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	39.1	43.5	78	87	50-150	11	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.5	50.2	93	100	70-130	8	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	46.8	50.7	94	101	70-130	8	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	54.2	56.9	108	114	70-130	5	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	49.3	57.7	99	115	70-130	16	20	

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Parameter	Units	40138122008		1391218		1391219		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
1,3-Dichlorobenzene	ug/L	<0.50	50	50	45.1	48.9	90	98	70-131	8	20			
1,4-Dichlorobenzene	ug/L	<0.50	50	50	45.0	48.6	90	97	70-130	8	20			
Benzene	ug/L	<0.50	50	50	55.3	57.8	111	116	57-138	4	20			
Bromodichloromethane	ug/L	<0.50	50	50	51.9	55.9	104	112	70-130	7	20			
Bromoform	ug/L	<0.50	50	50	42.6	46.3	85	93	70-130	8	20			
Bromomethane	ug/L	<2.4	50	50	31.9	38.9	64	78	33-130	20	27			
Carbon tetrachloride	ug/L	<0.50	50	50	49.4	52.6	99	105	70-138	6	20			
Chlorobenzene	ug/L	<0.50	50	50	47.3	51.1	95	102	70-130	8	20			
Chloroethane	ug/L	<0.37	50	50	45.7	48.3	91	97	51-130	5	20			
Chloroform	ug/L	<2.5	50	50	52.8	56.5	106	113	70-130	7	20			
Chloromethane	ug/L	0.70J	50	50	37.5	39.7	74	78	25-132	6	20			
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	52.1	55.9	104	112	61-140	7	20			
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	51.4	54.9	103	110	70-130	6	20			
Dibromochloromethane	ug/L	<0.50	50	50	45.0	49.4	90	99	70-130	9	20			
Dichlorodifluoromethane	ug/L	<0.22	50	50	39.7	40.2	79	80	23-130	1	20			
Ethylbenzene	ug/L	<0.50	50	50	48.7	51.7	97	103	70-138	6	20			
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	49.9	54.0	100	108	70-152	8	20			
m&p-Xylene	ug/L	<1.0	100	100	101	107	101	107	70-140	6	20			
Methyl-tert-butyl ether	ug/L	<0.17	50	50	53.4	56.5	107	113	66-139	6	20			
Methylene Chloride	ug/L	<0.23	50	50	48.8	52.7	98	105	70-130	8	20			
o-Xylene	ug/L	<0.50	50	50	46.9	50.2	94	100	70-134	7	20			
Styrene	ug/L	<0.50	50	50	51.1	55.4	102	111	70-138	8	20			
Tetrachloroethene	ug/L	0.60J	50	50	44.0	47.4	87	94	70-148	7	20			
Toluene	ug/L	<0.50	50	50	47.9	50.4	96	101	70-130	5	20			
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	50.9	54.5	102	109	70-133	7	20			
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	47.6	50.0	95	100	69-130	5	20			
Trichloroethene	ug/L	11.6	50	50	61.4	65.9	100	109	70-131	7	20			
Trichlorofluoromethane	ug/L	<0.18	50	50	49.8	53.6	100	107	50-150	7	20			
Vinyl chloride	ug/L	<0.18	50	50	51.2	53.0	102	106	49-133	3	20			
Xylene (Total)	ug/L	<1.5	150	150	148	157	99	105	70-135	6	20			
4-Bromofluorobenzene (S)	%						97	97	70-130					
Dibromofluoromethane (S)	%						105	103	70-130					
Toluene-d8 (S)	%						95	97	70-130					

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: 21-39942B F+L MLK PHASE II  
 Pace Project No.: 40137972

QC Batch: 234685 Analysis Method: EPA 8270 by SIM  
 QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
 Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004

METHOD BLANK: 1390441 Matrix: Solid  
 Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<8.3	16.7	09/13/16 14:40	
2-Methylnaphthalene	ug/kg	<8.3	16.7	09/13/16 14:40	
Acenaphthene	ug/kg	<8.3	16.7	09/13/16 14:40	
Acenaphthylene	ug/kg	<7.5	16.7	09/13/16 14:40	
Anthracene	ug/kg	<8.6	16.7	09/13/16 14:40	
Benzo(a)anthracene	ug/kg	<5.8	16.7	09/13/16 14:40	
Benzo(a)pyrene	ug/kg	<6.0	16.7	09/13/16 14:40	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	09/13/16 14:40	
Benzo(g,h,i)perylene	ug/kg	<6.3	16.7	09/13/16 14:40	
Benzo(k)fluoranthene	ug/kg	<9.2	16.7	09/13/16 14:40	
Chrysene	ug/kg	<7.7	16.7	09/13/16 14:40	
Dibenz(a,h)anthracene	ug/kg	<6.1	16.7	09/13/16 14:40	
Fluoranthene	ug/kg	<8.3	16.7	09/13/16 14:40	
Fluorene	ug/kg	<8.3	16.7	09/13/16 14:40	
Indeno(1,2,3-cd)pyrene	ug/kg	<6.3	16.7	09/13/16 14:40	
Naphthalene	ug/kg	<8.3	16.7	09/13/16 14:40	
Phenanthrene	ug/kg	<8.3	16.7	09/13/16 14:40	
Pyrene	ug/kg	<8.3	16.7	09/13/16 14:40	
2-Fluorobiphenyl (S)	%	61	26-130	09/13/16 14:40	
Terphenyl-d14 (S)	%	81	10-130	09/13/16 14:40	

LABORATORY CONTROL SAMPLE: 1390442

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	233	70	48-130	
2-Methylnaphthalene	ug/kg	333	225	67	49-130	
Acenaphthene	ug/kg	333	222	67	54-130	
Acenaphthylene	ug/kg	333	221	66	56-130	
Anthracene	ug/kg	333	273	82	70-130	
Benzo(a)anthracene	ug/kg	333	267	80	58-130	
Benzo(a)pyrene	ug/kg	333	280	84	58-130	
Benzo(b)fluoranthene	ug/kg	333	280	84	50-130	
Benzo(g,h,i)perylene	ug/kg	333	173	52	39-130	
Benzo(k)fluoranthene	ug/kg	333	284	85	57-130	
Chrysene	ug/kg	333	272	82	64-130	
Dibenz(a,h)anthracene	ug/kg	333	215	65	44-130	
Fluoranthene	ug/kg	333	281	84	59-130	
Fluorene	ug/kg	333	229	69	56-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	206	62	45-130	
Naphthalene	ug/kg	333	222	67	46-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

LABORATORY CONTROL SAMPLE: 1390442

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	273	82	56-130	
Pyrene	ug/kg	333	260	78	59-130	
2-Fluorobiphenyl (S)	%			65	26-130	
Terphenyl-d14 (S)	%			86	10-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1390443 1390444

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual	
		40137924002 Result	Spike Conc.	Spike Conc.	MS Result						MSD Result
1-Methylnaphthalene	ug/kg	<8.5	341	341	221	202	65	59	41-130	9	24
2-Methylnaphthalene	ug/kg	<8.5	341	341	224	206	66	60	42-130	9	25
Acenaphthene	ug/kg	<8.5	341	341	220	197	64	58	49-130	11	27
Acenaphthylene	ug/kg	<7.6	341	341	218	195	64	57	52-130	11	26
Anthracene	ug/kg	<8.9	341	341	253	233	74	68	61-130	8	29
Benzo(a)anthracene	ug/kg	<5.9	341	341	246	225	72	66	45-130	9	28
Benzo(a)pyrene	ug/kg	<6.1	341	341	263	240	77	70	39-130	9	34
Benzo(b)fluoranthene	ug/kg	<8.5	341	341	286	222	84	65	30-130	25	43
Benzo(g,h,i)perylene	ug/kg	<6.5	341	341	153	131	45	38	24-130	16	34
Benzo(k)fluoranthene	ug/kg	<9.4	341	341	266	267	78	78	41-130	1	32
Chrysene	ug/kg	<7.9	341	341	256	231	75	68	46-130	10	37
Dibenz(a,h)anthracene	ug/kg	<6.3	341	341	192	167	56	49	33-130	14	34
Fluoranthene	ug/kg	<8.5	341	341	256	235	75	69	41-130	8	25
Fluorene	ug/kg	<8.5	341	341	217	196	63	57	49-130	10	30
Indeno(1,2,3-cd)pyrene	ug/kg	<6.5	341	341	183	159	54	47	30-130	14	28
Naphthalene	ug/kg	<8.5	341	341	232	209	68	61	39-130	10	26
Phenanthrene	ug/kg	<8.5	341	341	254	234	74	68	47-130	8	26
Pyrene	ug/kg	<8.5	341	341	242	222	71	65	37-130	9	30
2-Fluorobiphenyl (S)	%						65	58	26-130		
Terphenyl-d14 (S)	%						81	71	10-130		

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### QUALITY CONTROL DATA

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

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QC Batch: 234568                      Analysis Method: ASTM D2974-87  
QC Batch Method: ASTM D2974-87                      Analysis Description: Dry Weight/Percent Moisture  
Associated Lab Samples: 40137972001, 40137972002, 40137972003, 40137972004

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SAMPLE DUPLICATE: 1389994

Parameter	Units	40137998002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.4	18.2	1	10	

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## QUALIFIERS

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above LOD.  
J - Estimated concentration at or above the LOD and below the LOQ.  
LOD - Limit of Detection adjusted for dilution factor and percent moisture.  
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.  
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.  
R1 RPD value was outside control limits.  
W Non-detect results are reported on a wet weight basis.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 21-39942B F+L MLK PHASE II  
Pace Project No.: 40137972

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40137972001	B-1 (2-3')	EPA 3050	234673	EPA 6010	234771
40137972002	B-4 (2-3')	EPA 3050	234673	EPA 6010	234771
40137972003	B-2 (2-3')	EPA 3050	234673	EPA 6010	234771
40137972004	B-3 (1.5-2.5')	EPA 3050	234673	EPA 6010	234771
40137972001	B-1 (2-3')	EPA 7471	234949	EPA 7471	235086
40137972002	B-4 (2-3')	EPA 7471	234949	EPA 7471	235086
40137972003	B-2 (2-3')	EPA 7471	234949	EPA 7471	235086
40137972004	B-3 (1.5-2.5')	EPA 7471	234949	EPA 7471	235086
40137972001	B-1 (2-3')	EPA 3546	234685	EPA 8270 by SIM	234747
40137972002	B-4 (2-3')	EPA 3546	234685	EPA 8270 by SIM	234747
40137972003	B-2 (2-3')	EPA 3546	234685	EPA 8270 by SIM	234747
40137972004	B-3 (1.5-2.5')	EPA 3546	234685	EPA 8270 by SIM	234747
40137972001	B-1 (2-3')	EPA 5035/5030B	234580	EPA 8260	234581
40137972002	B-4 (2-3')	EPA 5035/5030B	234580	EPA 8260	234581
40137972003	B-2 (2-3')	EPA 5035/5030B	234580	EPA 8260	234581
40137972004	B-3 (1.5-2.5')	EPA 5035/5030B	234580	EPA 8260	234581
40137972009	METHANOL TRIP BLANK	EPA 5035/5030B	234580	EPA 8260	234581
40137972005	TW-4	EPA 8260	234529		
40137972006	TW-1	EPA 8260	234529		
40137972007	TW-2	EPA 8260	234529		
40137972008	TW-3	EPA 8260	234529		
40137972010	TRIP BLANK	EPA 8260	234828		
40137972001	B-1 (2-3')	ASTM D2974-87	234568		
40137972002	B-4 (2-3')	ASTM D2974-87	234568		
40137972003	B-2 (2-3')	ASTM D2974-87	234568		
40137972004	B-3 (1.5-2.5')	ASTM D2974-87	234568		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

Page 1 of

40137972

Page 50 of 51



Company Name: **Ramboll Environ**  
 Branch/Location: **Brockfield**  
 Project Contact: **Jeanne Tarvin**  
 Phone: **262-901-0085**  
 Project Number: **21-39942B**  
 Project Name: **F+L MLK Phase II**  
 Project State: **WI**  
 Sampled By (Print): **Jonathan Fuqua**  
 Sampled By (Sign): *Jonathan Fuqua*  
 PO #: \_\_\_\_\_ Regulatory Program: \_\_\_\_\_

### CHAIN OF CUSTODY

**Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #: \_\_\_\_\_  
 Mail To Contact: \_\_\_\_\_  
 Mail To Company: \_\_\_\_\_  
 Mail To Address: \_\_\_\_\_  
 Invoice To Contact: **Jeanne Tarvin**  
 Invoice To Company: **Ramboll Environ**  
 Invoice To Address: **175 N Corporate Dr  
 Suite 160  
 Brockfield, WI 53045**  
 Invoice To Phone: **262-901-0085**

**Data Package Options** (billable)  
 EPA Level III  
 EPA Level IV

**MS/MSD**  
 On your sample (billable)  
 NOT needed on your sample

**Matrix Codes**  
 A = Air W = Water  
 B = Biota DW = Drinking Water  
 C = Charcoal GW = Ground Water  
 O = Oil SW = Surface Water  
 S = Soil WW = Waste Water  
 Sl = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	FILTERED? (YES/NO)	Y/N	PRESERVATION (CODE)*	Pick Letter	Analytes Requested	VOCs (8260)	PAHs (8270)	8 R CR Metals (606)	VOCs (8260)
		DATE	TIME										
001	B-1 (2-3')	9/7/16	1015	S				F		X	X	X	
002	B-4 (2-3')	9/7/16	1055	S				A		X	X	X	
003	B-2 (2-3')	9/7/16	1130	S				A		X	X	X	
004	B-3 (1.5-2.5')	9/7/16	1200	S				A		X	X	X	
005	TW-4	9/7/16	1345	GW									X
006	TW-1	9/8/16	1000	GW									X
007	TW-2	9/8/16	1045	GW									X
008	TW-3	9/8/16	1110	GW									X
009	Methanol TRIP BLANK									X			
010	TRIP BLANK												X

**CLIENT COMMENTS**  
 1-40zAg<sup>+</sup> 1-40zP<sup>A</sup> 1-40mlV<sup>F</sup>  
 ↓ ↓ ↓  
 3-40mlV<sup>B</sup>  
 ↓  
 1-40mlV<sup>F</sup> 2-40mlV<sup>B</sup>

**LAB COMMENTS (Lab Use Only)**  
 Profile #

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed: **10-DAY**

Transmit Prelim Rush Results by (complete what you want):

Relinquished By: <i>Jonathan Fuqua</i> Date/Time: <b>9-8-16 15:32</b>	Received By: <i>Mary Jannin</i> Date/Time: <b>9/8/16 15:32</b>	<b>PACE Project No.</b> <b>40137972</b> <b>Receipt Temp = ROT °C</b> <b>Sample Receipt pH</b> <del>OK / Adjusted</del> <b>Cooler Custody Seal</b> <b>Present / Not Present</b> <b>Intact / Not Intact</b>
Relinquished By: <i>Mary Jannin</i> Date/Time: <b>9/8/16 16:30</b>	Received By: _____ Date/Time: _____	
Relinquished By: <i>CS Logistics</i> Date/Time: <b>9/9/16 1000</b>	Received By: <i>Bob [unclear]</i> Date/Time: <b>9/9/16 1000</b>	
Relinquished By: _____ Date/Time: _____	Received By: _____ Date/Time: _____	

Samples on HOLD are subject to special pricing and release of liability



Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: Ramboll Environmental

Project #: WO#: 40137972

Courier: [ ] Fed Ex [ ] UPS [ ] Client [ ] Pace Other: CS Logistics



Custody Seal on Cooler/Box Present: [x] yes [ ] no

Custody Seal on Samples Present: [ ] yes [x] no

Packing Material: [x] Bubble Wrap [x] Bubble Bags [ ] None [ ] Other

Thermometer Used: NA Type of Ice: [x] Wet [ ] Blue [ ] Dry [ ] None [x] Samples on ice, cooling process has begun

Cooler Temperature: Uncorr: ROT /Corr: Biological Tissue is Frozen: [ ] yes [ ] no

Temp Blank Present: [ ] yes [x] no

Person examining contents:
Date: 9/9/16
Initials: BJ

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Comments:

Table with 15 rows for Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis, Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, Headspace in VOA Vials, Trip Blank Present, Pace Trip Blank Lot #.

Client Notification/ Resolution:
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_
Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: 9/9/16